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UNITED STATES ARMY
COMBAT DEVELOPMENTS COMMAND

FINAL STUDY

PREVENTION AND CONTROL
OF
COMMUNICABLE DISEASES
OF
ANIMALS

USACDC ACTION CONTROL NUMBER 14309

MARCH 1969

APR 16 1969



Prepared By
UNITED STATES ARMY
COMBAT DEVELOPMENTS COMMAND
MEDICAL SERVICE AGENCY
Fort Sam Houston, Texas

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Army Combat Development
Command, Ft. Belvoir, Va. 22060

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ACKNOWLEDGMENT

This study has been approved by the Commanding General, United States Army Combat Developments Command, for publication and distribution. It does not necessarily have the approval of Headquarters, Department of the Army.

The conclusions and recommendations are based upon information gathered and analysis performed primarily by the USACDC Medical Service Agency.

PREVENTION AND CONTROL OF
COMMUNICABLE DISEASES OF ANIMALS

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ABSTRACT

This study determines procedures required to facilitate the prevention and control of communicable diseases of animals in CONUS and overseas areas to include sufficient detail to determine requirements for immunizations, diagnostic tests and examinations, and the movement and control of Government-owned animals and other animals under military control.

SUMMARY

1. This study addresses the problem of prevention and control of communicable diseases of animals in CONUS and oversea areas to include those diseases transmissible from animal to animal as well as those diseases of animals transmissible to man.
2. Questionnaires were sent to senior Veterinary Corps officers in major US Army commands. Responses were evaluated and used in developing study conclusions and recommendations.
3. The study product (the proposed revision of AR 40-655 at Annex D) was prepared based on a subjective review and analysis of military and civilian publications and study questionnaires.
4. The principal changes recommended in the proposed revision of AR 40-655 are:
 - a. Revision of immunization requirements.
 - b. Revision of requirements for diagnostic tests and examinations.
 - c. Addition of a requirement for participation by veterinary personnel in wildlife disease surveys and control programs.
 - d. Addition of a requirement for chemoprophylaxis for psittacine birds.
5. This project is identified as USACDC Action Control Number 14309 and supports the following:

a. Army Concept Program	Army 70
b. Study, "Army 70," USACDC Action Control Number	6078
c. Army Tasks	<ol style="list-style-type: none">1. High Intensity Conflict2. Mid Intensity Conflict3. Low Intensity Conflict Type I5. Air and Missile Defense7. Complementing of Allied Land Power
d. Phase	Doctrine
e. Functions	Service Support

MAIN REPORT

PREVENTION AND CONTROL OF COMMUNICABLE DISEASES OF ANIMALS

1. Problem. To determine the procedures required to facilitate the prevention and control of communicable diseases of animals in CONUS and theaters of operations to include sufficient detail to determine requirements for immunizations, diagnostic tests and examinations, and the movement and control of Government-owned animals and other animals under military control.

2. Assumptions.

a. The Army Medical Department mission, as stated in AR 40-1, will remain the same during the 1965-1970 time period.

b. The number of military animals used by the U.S. Army and other U.S. Armed Services in 1970 will, as a minimum, be equal to the number currently employed.

c. During the 1965-1970 time period, communicable diseases will continue to be of major importance in contributing to morbidity and mortality in Government-owned animals.

3. Facts Bearing on the Problem.

a. Communicable diseases are of major importance in contributing to morbidity and mortality in Government-owned animals.

b. Those communicable diseases of animals transmissible to man are of current and potential major importance in contributing to morbidity and mortality in military personnel.

c. It is now possible to materially reduce the impact of communicable diseases of animals on military operations.

d. AR 40-655, the principal publication addressing the prevention and control of communicable diseases of animals, must be revised.

4. Discussion.

a. General.

(1) Historically, communicable diseases of animals have exerted a major influence on military operations. This resulted primarily from death or debility in military animals; a reduction of the food supply; and military personnel contracting diseases from animals. It is now possible to materially reduce the impact of communicable diseases of animals on military operations. The immunizing agents, diagnostic tests, therapeutic agents, and other control procedures, which are available, have made this possible.

(2) This study addresses the prevention and control of communicable diseases of animals in oversea areas and CONUS. The initial intent was to study only the prevention and control in oversea areas; however, as the study progressed it became apparent that the prevention and control of communicable diseases of animals in oversea areas and CONUS is a single indivisible problem. Consequently, the scope was broadened to include both CONUS and oversea areas.

(3) The final study product (the proposed revision of AR 40-655 at Annex D) was prepared based on a subjective review and analysis of military publications, civilian publications, and study questionnaires. The questionnaires were completed by senior Veterinary Corps officers in oversea and CONUS assignments. The questions and responses are presented in Annex C.

b. Revision of AR 40-655.

(1) A comprehensive review of military and civilian publications was conducted for new/improved procedures relating to the prevention and control of communicable diseases of animals. This review embraced requirements for immunizations, diagnostic tests and examinations, and the movement and control of Government-owned animals and other animals under military control. The study effort resulted in a proposed revision of AR 40-655.

(2) AR's 40-1, 40-5, 40-12, and 40-905 all address the prevention and control of communicable diseases of animals, while AR 40-655 deals exclusively with this subject. When this study was initiated, it was thought that a new publication would be desirable for use by the army in the field; however, as the study progressed, it became evident that a single publication for use in both CONUS and oversea areas would be more desirable. AR 40-655 was published in May 1961, with Change 1 being dated December 1961. This regulation was

well written and much of it still remains current. However, in order to update this regulation, so that it will provide guidance on new procedures identified during this study, one new paragraph must be added and all other paragraphs must be changed. The changes required are extensive enough to warrant a revision, as prescribed by paragraph 11, AR 310-3. The principal changes required in this revision are:

- (a) Revision of immunization requirements.
- (b) Revision of requirements for diagnostic tests and examinations.
- (c) Addition of a requirement for participation by veterinary personnel in wildlife disease surveys and control programs.
- (d) Addition of a requirement for chemoprophylaxis for psittacine birds.

(3) It is believed that the proposed revision of AR 40-655 at Annex D, as written, is suitable for publication. However, it is recognized that Office of The Surgeon General, Department of the Army, has proponency for this regulation and will be responsible for coordination of the proposed revision and determining its adequacy prior to publication.

5. Conclusions.

- a. One publication addressing the prevention and control of communicable diseases of animals is required for use in both CONUS and oversea areas. No doctrinal or materiel changes are currently indicated.
- b. The proposed revision of AR 40-655 at Annex D can adequately fill the above requirement.

6. Recommendation. The proposed revision of AR 40-655 at Annex D be approved and published by Department of the Army.

ANNEX A

STUDY DIRECTIVE

DEPARTMENT OF THE ARMY
HEADQUARTERS
UNITED STATES ARMY COMBAT DEVELOPMENTS COMMAND
FORT BELVOIR, VIRGINIA 22060

CDCCD-C

23 September 1968

SUBJECT: Combat Development Study Directive: Prevention and Control
of Communicable Diseases of Animals

Commanding General
USACDC Combat Service Support Group
Fort Lee, Virginia 23801

1. General. It is requested that a study be undertaken which will develop recommendations for the prevention and control of communicable diseases of animals.
2. Purpose. The study will develop the procedures required to facilitate the prevention and control of communicable diseases of animals in a theater of operations to include sufficient detail to determine requirements for (a) immunizations, (b) diagnostic tests and examinations, and (c) the movement and control of Government-owned animals and other animals under military control. In addition, as appropriate, the study will recommend procedures to detect, prevent, and control communicable diseases of animals to include those diseases of animals transmissible to man (zoonoses).
3. References. An initial listing is at Inclosure 2.
4. Assumptions.
 - a. The Army Medical Department mission, as stated in AR 40-1, will remain the same during the 1965-1970 time period.

CDCCD-C

23 September 1968

SUBJECT: Combat Development Study Directive: Prevention and Control of Communicable Diseases of Animals

b. The number of military animals used by the US Army and other US Armed Services in 1970 will, as a minimum, be equal to the number currently available.

c. During the 1965-1970 time period, communicable diseases will continue to be of major importance in contributing to morbidity and mortality in Government-owned animals.

5. Guidance. The following guidance for preparation of the study is furnished:

a. A comprehensive review for new/improved methods will be conducted of military and civilian publications relating to the prevention and control of communicable diseases of animals.

b. The study will include a determination of the following:

(1) Immunizations required to prevent and control communicable diseases in Government-owned animals and other animals under military control.

(2) Diagnostic tests and examinations required to prevent and control communicable diseases in Government-owned animals and other animals under military control.

(3) Procedures governing the movement and control of Government-owned animals and other animals under military jurisdiction which are required to prevent and control communicable diseases of animals.

(4) Procedures required to detect, prevent, and control those communicable diseases of animals transmissible to man (zoonoses).

(5) Doctrinal changes for incorporation in appropriate field manuals.

(6) The recommended method for disseminating the information derived from this study.

c. To insure that the materiel implications of studies developed by USACDC are recognized and that appropriate follow-up action is taken to process materiel documents, the letter forwarding such studies to this headquarters will contain the following statement: "This study has been reviewed for materiel implications. As a result of this

CDCCD-C

23 September 1968

SUBJECT: Combat Development Study Directive: Prevention and Control of Communicable Diseases of Animals

review, it has been determined that this study (will)(will not) generate any new materiel objectives or requirements." When new materiel requirements are involved, the following additional statements will be added: "New materiel requirements generated by this study are indicated in (paragraph) (Annex) (Appendix) _____. It is recognized that approval of this study by HQ, USACDC, imposes an obligation on the appropriate proponent group and agency to initiate and process the necessary materiel requirements documents in support of these requirements."

6. Administration.

a. Coordination. The draft study will be coordinated with the following:

(1) Appropriate Combat Developments agencies.

(2) US Army Medical Field Service School, Brooke Army Medical Center, Fort Sam Houston, Texas 78234.

(3) US Army Medical Research and Development Command, Main Navy Building, Washington, D.C. 20315.

b. Suspense dates:

(1) Initial draft completed: 31 January 1969.

(2) Coordinated draft to USACDC Combat Service Support Group: 28 March 1969.

c. Distribution:

(1) Coordination draft: Fifteen copies to USACDC Combat Service Support Group.

(2) Final draft: Recommended distribution list will be submitted with final draft.

7. Essential Elements of Analysis. See Inclosure 1.

8. Correlation. This project is identified as USACDC Action Control Number 14309 and supports the following:

CDCCD-C

23 September 1968

SUBJECT: Combat Development Study Directive: Prevention and Control
of Communicable Diseases of Animals

- a. Army Concept Program Army 70
- b. Study, "Army 70," USACDC
Action Control Number 6078
- c. Army Tasks
 - 1. High Intensity Conflict
 - 2. Mid Intensity Conflict
 - 3. Low Intensity Conflict Type I
 - 5. Air and Missile Defense
 - 7. Complementing of Allied Land Power
- d. Phase Doctrine
- e. Functions Service Support

FOR THE COMMANDER:

2 Incl
as

ESSENTIAL ELEMENTS OF ANALYSIS
FOR
PREVENTION AND CONTROL OF COMMUNICABLE DISEASES OF ANIMALS

- EEA 1. Which immunizations are required to prevent and control communicable diseases in Government-owned animals and other animals under military control?
- EEA 2. Which diagnostic tests and examinations are required to prevent and control communicable diseases in Government-owned animals and other animals under military control?
- EEA 3. Which procedures governing the movement and control of Government-owned animals and other animals under military jurisdiction are required to prevent and control communicable diseases of animals?
- EEA 4. Which procedures are required to detect, prevent, and control those communicable diseases of animals transmissible to man?
- EEA 5. What are the personnel and equipment requirements of Army Medical Department units to facilitate the performance of those functions in EEA's 1, 2, 3, and 4 above?
- EEA 6. What information should be incorporated in field manuals or other military publications to implement the changes recommended in EEA's 1, 2, 3, and 4 above?
- EEA 7. What method should be used to disseminate the information derived from this study?

REFERENCES

1. AR 40-1, Composition, Mission, and Functions of the Army Medical Service.
2. AR 40-12, Medical and Agricultural Foreign and Domestic Quarantine Regulations for Vessels, Aircraft, and Other Transport of the Armed Forces.
3. AR 40-655, Prevention and Control of Communicable Diseases of Animals.
4. AR 40-905, Veterinary Service for Public Animals.
5. AR 40-920, Veterinary Laboratory Service.
6. AR 190-12, Sentry Dogs.
7. AR 715-31, Sentry/Scout Dogs.
8. FM 8-10, Medical Service, Theater of Operations.
9. FM 8-16-1(T), Medical Service, Field Army.
10. FM 8-17-1(T), Medical Service, COMMZ.
11. Benjamin, Maxine H., Outline of Veterinary Clinical Pathology (Ames, Iowa: The Iowa State University Press, Second Edition, 1962).
12. Hoskins, H. Preston and others, Canine Medicine (Santa Barbara, California: American Veterinary Publications, Inc., Second Edition, Revised, 1962).
13. Hull, Thomas G., Diseases Transmitted from Animals to Man (Springfield, Illinois: Charles C. Thomas, Fifth Edition, 1963).
14. Schalm, Oscar W., Veterinary Hematology (Philadelphia, Pennsylvania: Lea & Febiger, 1961).
15. Technical Report Series No. 321, WHO Expert Committee on Rabies (Geneva: World Health Organization, Fifth Report, 1966).
16. Technical Report Series No. 378, Joint FAO/WHO Committee on Zoonoses (Geneva: World Health Organization, Third Report, 1967).

ANNEX B

METHODOLOGY

1. Purpose. The purpose of this annex is to discuss the methods used in determining the procedures required to facilitate the prevention and control of communicable diseases of animals.

2. Discussion.

a. The procedures required to facilitate the prevention and control of communicable diseases of animals are incorporated in the proposed revision of AR 40-655 at Annex D.

b. This revision is based on information derived from military publications, civilian publications, and study questionnaires. A comprehensive review of military and civilian publications was conducted for new/improved procedures relating to the prevention and control of communicable diseases of animals. The questionnaires were reviewed and analyzed in depth. All questions, with the exception of question five, were subjective in nature and were difficult to objectively analyze. It was possible to convert the responses to question one to a tabular format; however, the responses to the other questions were too unwieldy for a similar format.

c. The study product (the proposed revision of AR 40-655) was prepared based on a subjective review and analysis of source material and reflects the professional opinion of the author. It is recognized that this approach has major shortcomings; however, the scope of this study dictated this course of action.

ANNEX C

DETAILED STUDY DISCUSSION

1. Purpose. The purpose of this annex is to present a detailed discussion and analysis of the requirements for the prevention and control of communicable diseases of animals.

2. Background Information.

a. Historically, communicable diseases of animals have exerted a major influence on military operations. This resulted primarily from:

(1) A reduction in the combat effectiveness of military units through death or debility in military animals (cavalry, pack, or draft animals).

(2) A reduction of the food supply resulting from the epizootics which inevitably accompany military campaigns.

(3) Military personnel contracting diseases from animals (zoonotic diseases).

b. Every major military campaign on the European continent has been accompanied by major epizootics in domestic animals (foot-and-mouth diseases, rinderpest, and contagious bovine pleuropneumonia, as examples). The complete disruption of control procedures and the movement of diseased animals were primary contributing factors. As recently as World War II, major epizootics of foot-and-mouth disease occurred in Germany, Holland, and Luxemburg during the course of military operations in these areas.

c. It is now possible to materially reduce the impact of communicable diseases of animals on military operations. The immunizing agents, diagnostic tests, therapeutic agents, and other control procedures, which are available, have made this possible.

d. This study has been conducted to review the various means available to facilitate the prevention and control of communicable diseases in animals, either Government-owned or under military control. The ultimate goal being to develop a military publication which would provide guidance to commanders and their staff in reducing or eliminating the impact of communicable diseases of animals on military operations.

e. This century has witnessed a dramatic decline in horses and mules in the US Army. In World War I, there was one horse or mule per every three men, while in World War II the ratio was 1 per every 134 men. Horses and mules have disappeared from the army in the field, with the exception of those few isolated instances where they have been locally procured for use as draft or pack animals. While the horse and mule have practically disappeared from the US Army, we have witnessed a marked increase in the use of scout and sentry dogs since 1960. There has also been a similar increase in the use of laboratory animals.

f. Currently, as in the past, the commander is confronted with the same three basic problems presented in paragraph 2a, above.

3. General.

a. This study was undertaken by the Medical Service Agency to develop procedures required to facilitate the prevention and control of communicable diseases of animals in a theater of operations. As the study progressed, it became evident that it would be possible and desirable to develop procedures that would be applicable to CONUS as well as oversea areas. It is difficult to separate the prevention and control of communicable diseases of animals into two entities (CONUS and oversea). Government-owned or privately-owned animals (the property of military personnel) are shipped from or to CONUS on a daily basis. Consequently, it appears that a single publication provides the most desirable approach to an effective and uniform program.

b. Questionnaires were prepared and forwarded to the Assistant for Veterinary Services, Office of The Surgeon General, Department of the Army, Washington, D.C., for distribution. These questionnaires provided a valuable source of background information. In fact, of the three sources of study information; questionnaires, military publications, and civilian publications; the questionnaires proved to be of greatest value.

4. Discussion.

a. The problem, as stated in paragraph 1 of the main report, is: "to determine the procedures required to facilitate the prevention and control of communicable diseases of animals in CONUS and theaters of operations to include sufficient detail to determine requirements for immunizations, diagnostic tests and examinations, and the movement and control of Government-owned animals and other animals under military control." In the course of this study it became apparent that the prevention and control of communicable diseases of animals in a theater of operations and CONUS is a single indivisible problem. Consequently, the scope was broadened to include both CONUS and oversea areas.

b. After determining the procedures required to facilitate the prevention and control of communicable diseases of animals, one must next establish the method to be used to disseminate this information. AR's 40-1, 40-5, 40-12 and 40-905 all address the prevention and control of communicable diseases of animals, while AR 40-655 deals exclusively with this subject. When this study was initiated, it was felt that a new publication would be desirable for use by the army in the field; however, as the study progressed, it became evident that a single publication for use in both CONUS and oversea areas would be more desirable. AR 40-655 was published in May 1961, with Change 1 being dated December 1961. This publication was well written, and much of it still remains current. However, in order to update this regulation, one new paragraph must be added and all other existing paragraphs must be changed. The changes required are extensive enough to warrant a revision as prescribed by paragraph 11, AR 310-3. Accordingly, a proposed revision to AR 40-655 has been prepared and is found at Annex D. Paragraphs 4c through 4f, below, present a discussion of the major changes.

c. Immunizations selected in Appendix I for further discussion, herein, were those for the prevention of anthrax, brucellosis, canine distemper, equine influenza, equine viral encephalitides, feline panleukopenia, feline pneumonitis, infectious canine hepatitis, leptospirosis, rabies, smallpox (monkeypox), strangles, and tetanus. Immunizing agents are available to protect against many other communicable diseases not listed above. All communicable diseases of animals do not occur on a world-wide basis. Consequently, the mandatory immunizations selected should provide protection against the more important diseases which occur world-wide. Other factors to consider are immunizing animals against diseases transmissible to man, the immunization requirements imposed by US Department of Agriculture, the various states and foreign countries, and species susceptibility and intended use of the animal(s). The dog and horse comprise the two species of "working animals" in the US Army. Minimum immunization standards for these species would be more comprehensive than for laboratory animals. The latter group could be used for experimentation that would be interfered with by vaccination. The most practical approach in establishing immunization requirements is to establish immunizations that are mandatory and make all others optional. Those considered optional would be administered as influenced by local factors. This approach has been used in the proposed revision of paragraph 8, AR 40-655 at Annex D. The immunization requirements for Government-owned and privately-owned animals will be discussed in separate subparagraphs below.

(1) Immunization requirements for Government-owned animals. The immunizations discussed below are either currently prescribed in AR 40-655 or they are included in the proposed revision

at Annex D. In addition to the mandatory immunizations prescribed in the proposed revision, other vaccines may be administered when indicated by local conditions.

(a) Anthrax.

Discussion: Currently prescribed by AR 40-655, if determined necessary by the veterinarian. The proposed revision to AR 40-655 contains the same provisions.

(b) Brucellosis.

Discussion: Immunization against brucellosis has been added. The age, sex, etc., will be determined by the veterinarian in accordance with applicable USDA/state regulations.

(c) Canine distemper.

Discussion: Currently prescribed in AR 40-655 and retained in the proposed revision thereto.

(d) Equine influenza.

Discussion: Immunization against equine influenza has been added. This disease has assumed increased importance since the publication of AR 40-655, because of the appearance of A-equine-2 virus in 1963. A bivalent vaccine which contains both A-equine-1 and A-equine-2 viruses is available for the immunization of horses.

(e) Equine viral encephalitides.

Discussion: Currently prescribed in AR 40-655 and retained in the proposed revision thereto.

(f) Feline panleukopenia (feline distemper).

Discussion: Currently prescribed in AR 40-655, but not included in the proposed revision. There are only a relatively small number of Government-owned cats (*Felis cattus*), and the majority of these animals are located in research facilities. In some instances the vaccination would interfere with the animal's usefulness for scientific investigation. Therefore, it was determined that it is no longer necessary to list immunization against feline distemper as being mandatory. The proposed revision of AR 40-655 authorizes the administration of this and other vaccines (not specified as being mandatory) when determined necessary by local conditions.

(g) Feline pneumonitis.

Discussion: Currently prescribed in AR 40-655, but not included in the proposed revision. Deleted, based on the same considerations discussed in 4c(1)(f), above.

(h) Infectious canine hepatitis.

Discussion: Currently prescribed in AR 40-655 and retained in the proposed revision thereto.

(i) Leptospirosis.

Discussion: Currently prescribed in AR 40-655 and retained in the proposed revision thereto.

(j) Rabies.

Discussion: Currently prescribed in AR 40-655 and retained in the proposed revision thereto. The types of approved vaccines remain unchanged. They are LEP (low egg passage) Flury chicken embryo rabies vaccine, HEP (high egg passage) Flury chicken embryo rabies vaccine, and phenolized nervous-tissue rabies vaccine. The above selections provide two modified live virus vaccines and one inactivated virus vaccine. One or more of the above vaccines are approved by all countries which require vaccination against rabies. All species of animals, in which vaccination against rabies is required, may be safely and effectively vaccinated with one or more of the above vaccines. The above vaccines were recommended by the World Health Organization Expert Committee on Rabies (Fifth Report, dated 1966, the most current report). Considered, but not recommended for use at the present time, were the various tissue-culture rabies vaccines. These vaccines have gained considerable prominence in the last two years, and the United States Department of Agriculture has issued licenses for their manufacture and sale. It is the opinion of the author that these products will ultimately be accepted for use by the US Armed Forces; however, their current status as to established duration of immunity indicates that they require further evaluation.

(k) Smallpox (monkeypox).

Discussion: Immunization against smallpox (monkeypox) has been added. Subhuman primates contract both smallpox and monkeypox, and both of these diseases are transmissible to man. The same vaccine is used to immunize primates against both diseases.

(1) Strangles.

Discussion: Immunization against strangles has been added. This is a common disease of horses for which an effective immunizing agent is now available.

(m) Tetanus.

Discussion: Currently prescribed in AR 40-655 and retained in the proposed revision thereto.

(2) Immunization requirements for privately-owned animals. The immunizations discussed below are either currently prescribed in AR 40-655 or they are included in the proposed revision at Annex D. In addition to the mandatory immunizations prescribed in the proposed revision, other vaccines may be administered when indicated by local conditions.

(a) Brucellosis.

Discussion: Immunization against brucellosis has been added. The ages, sex, etc., will be determined by the veterinarian in conformance with applicable USDA/state regulations.

(b) Equine influenza.

Discussion: Immunization against equine influenza has been added. The necessity for immunization will be determined, on a local basis, by the veterinarian.

(c) Equine viral encephalitis.

Discussion: Currently prescribed in AR 40-655 and retained in the proposed revision thereto. However, the requirement has been modified so as to allow the veterinarian to determine the necessity for immunization on a local basis.

(d) Leptospirosis.

Discussion: Immunization against leptospirosis has been added. The necessity for immunization will be determined, on a local basis, by the veterinarian.

(e) Rabies.

Discussion: Currently prescribed in AR 40-655 and retained in the proposed revision thereto. This is the only immunization for privately-owned animals which is mandatory, the

necessity for all others being determined on a local basis. This action is in conformance with the provisions of paragraph 18a(4)(b)5, AR 40-1. The types of rabies vaccines are discussed in 4c(1)(j), above.

(f) Strangles.

Discussion: Immunization against strangles has been added. The necessity for immunization will be determined, on a local basis, by the veterinarian.

d. Diagnostic tests and examinations selected in Appendix I for further discussion, herein, were brucellosis test, external parasites (examination for), fecal examination, canine filariasis, mallein test, physical examination and tuberculin test. The diagnostic tests and examinations for Government-owned animals and privately-owned animals which are discussed below are either currently prescribed in AR 40-655 or they are included in the proposed revision at Annex D. In addition to the mandatory tests/examinations prescribed in the proposed revision, other tests/examinations may be performed when indicated by professional judgment.

(1) Mallein test.

Discussion: Currently prescribed in AR 40-655 and retained in the proposed revision thereto. Certain discretionary changes have been made as to frequency of testing, disposition of reactors, etc., so as to conform with USDA and foreign government regulations.

(2) Tuberculin test.

Discussion: Currently prescribed in AR 40-655 and retained in the proposed revision thereto. A minor change has been made to provide for retesting of primates.

(3) Brucellosis test.

Discussion: Testing for brucellosis has been added. The age, sex, etc., will be determined by the veterinarian in accordance with applicable USDA/state regulations.

(4) Canine filariasis.

Discussion: Currently prescribed in AR 40-655 and retained in the proposed revision thereto. Changes have been made in terminology, prescribed frequency, and examination technique.

(5) Gastrointestinal parasites.

Discussion: Examination for gastrointestinal parasites has been added. A minimum frequency at which Government-owned military dogs will be examined for intestinal parasites has been included.

(6) Physical examination.

Discussion: A requirement to perform physical examinations has been added. They are discussed in general terms in AR 40-655; however, it was determined that specific requirements should be included in the proposed revision.

(7) External parasites.

Discussion: Animal handlers are trained to conduct routine examinations for external parasites. Also, an examination for external parasites would be conducted in conjunction with a physical examination. Accordingly, it was determined that it is unnecessary to specifically require this examination in AR 40-655.

e. A list of those diseases of animals transmissible to man (zoonotic diseases) is found at Appendix II. Man may contract these diseases from domestic or wild animals, and many of them are found world-wide. The general provisions of AR 40-655 and other allied Army Regulations are adequate for the control of zoonotic diseases; however, it is believed that the revision of AR 40-655 must contain specific authority for veterinary personnel to participate in wildlife disease surveys and control programs. Paragraph 3 has been revised accordingly. The subject is addressed in very general terms, because the details of such programs must be established on a local level. It is envisioned that veterinary personnel would work with other Army Medical Department and engineer personnel in a well coordinated program. Tab B of Appendix I presents an example of participation by veterinary personnel in such programs.

f. United States Public Health Service regulations pertaining to the importation of psittacine birds were revised October 1967. A copy of the revised regulations is at Appendix III. These regulations are intended to prevent psittacine birds infected with psittacosis from entering the United States. AR 40-655 currently contains no provisions for the control of psittacosis. AR 40-12 contains provisions concerning the importation of psittacine birds into the United States; however, the depth of coverage is inadequate. AR 40-655 has been revised to adequately provide for the control of psittacosis in psittacine birds in oversea areas and in those birds being imported into the United States.

5. Summary.

- a. Historically, communicable diseases of animals have exerted a major influence on military operations.
- b. It is now possible to materially reduce the impact of communicable diseases of animals on military operations.
- c. The prevention and control of communicable diseases of animals in a theater of operations and CONUS is a single indivisible problem.
- d. One publication addressing the prevention and control of communicable diseases of animals is desirable for use in both CONUS and oversea areas.
- e. AR 40-655, when revised as indicated below, will satisfy the requirements of 5d above.
 - (1) Revision of immunization requirements.
 - (2) Revision of requirements for diagnostic tests and examinations.
 - (3) Addition of a requirement for participation by veterinary personnel in wildlife disease surveys and control programs.
 - (4) Addition of a requirement for chemoprophylaxis for psittacine birds.

APPENDIX I
to
ANNEX C

RESPONSES TO QUESTIONS ON
PREVENTION AND CONTROL OF COMMUNICABLE DISEASES OF ANIMALS

1. Purpose. The purpose of this appendix is to analyze the responses from Veterinary Corps officers (assigned to certain major US Army Commands) to questions related to the prevention and control of communicable diseases of animals.

2. Questionnaire. The questionnaire used in conjunction with this study is at Tab A. This questionnaire was prepared at the US Army Combat Developments Command Medical Service Agency and was forwarded to the Assistant for Veterinary Services, Office of The Surgeon General, Department of the Army, Washington, D.C., for distribution. Questionnaires were then distributed through technical channels to Veterinary Corps officers assigned to certain major US Army Commands. The distribution list recommended by this agency was modified through certain discretionary additions, one of which was to have eight questionnaires distributed to senior Veterinary Corps officers by the veterinary staff officer of the US Army Medical Research and Development Command.

3. Discussion.

a. All questions, with the exception of question number 5, were subjective in nature. Such questions vary widely in input and are difficult to objectively analyze. In spite of the above limitations, the information derived through these questionnaires was essential to the successful completion of this study.

b. An analysis of the responses follows: With one exception, the questionnaires were completed on an individual basis and were not consolidated by command. The exception to the above was the consolidated questionnaire received from HQ, US Army Forces, Southern Command, Fort Amador, Canal Zone. The questions and question numbers are identical to those in the questionnaire at Tab A.

(1) Question 1. Which immunizations should be required for the prevention/control of communicable diseases in Government-owned animals and other animals under military control? Please provide immunizations, species to be immunized, and type of biological product for each immunization.

(a) Government-owned animals. (See Figure 1)

A

IMMUNIZATION AGAINST--DISEASE

COMMAND	S P E C I E S		I M M U N I Z E D		1	1
	CAT	DOG	COW	HORSE		
US Army Japan (1 questionnaire)	Cat				1	
	Dog			1		1
US Army Alaska (3 questionnaires)	Cat				2	1
	Cow					
	Dog			2		
1 questionnaire recommended immu- nization require- ments of AR 40-655	Horse				1	2
US Army Ryukyu Islands (1 questionnaire)	Dog			1		1
US Army Support Thailand (1 questionnaire)	Cow		1			
	Dog		1			1
	Horse				1	
	Primates(monkeys, etc.)					
HQ, US Army Pacific (1 questionnaire)	No response - Government-owned animals not present in Hawaii					
Eighth US Army (1 questionnaire)	Dog		1			1
	Horse	1			1	
US Army Forces Southern Command (1 questionnaire consolidated before submission)	Cat				1	1
	Dog		1			1
	Horse				1	
	Primates(monkeys, etc.)					
US Army Europe (6 questionnaires) 1 questionnaire recommended immu- nization require- ments of AR 40-655	Cat				1	
	Cow	1				
	Dog	1	4			3
	Hog	1				1
	Horse	1		1	3	
	Sheep	1				
HQ, USCONARC (1 questionnaire)	Cat				1	1
	Cow	1				
	Dog		1			1
	Andplasmosis					

(B)

Vibriosis
Transmissible gastroenteritis
Tetanus
Swine erysipelas
Strangles
Smallpox (monkeypox)
Rinderpest
Rabies
Poliomyelitis
Pasteurellosis
Newcastle disease
Mink enteritis
Malignant edema
Leptospirosis
Laryngotracheitis

REMARKS ON BIOLOGICAL PRODUCTS**

				Inactivated virus rabies vaccine
1	1			Inactivated and live virus rabies vaccine
	2			Tissue culture origin or phenolized rabies vaccine
2	1			Tissue culture origin rabies vaccine
2	2			Tissue culture origin rabies vaccine
	1	2		Phenol inactivated virus rabies vaccine
1	1			Modified liver virus rabies vaccine annually
	1			
1	1		1	Modified liver virus rabies vaccine
	1		1	Other immunization as determined by the veterinarian
	1	1		Phenol inactivated virus rabies vaccine
	1			
	1		1	Modified live virus rabies vaccine
	1	1		
1	1			Inactivated virus rabies vaccine
1	1		1	Low egg passage, modified liver virus rabies vaccine
	1			Inactivated virus rabies vaccine
	1			
	1			Tissue culture origin rabies vaccine
4	5			Modified live virus, or phenolized, or tissue culture origin rabies vaccine
	1		1	Tissue culture origin rabies vaccine
	1		3	Tissue culture origin rabies vaccine
	1			Tissue culture origin rabies vaccine
	1			Phenol inactivated virus rabies vaccine
	1			High egg passage, modified live virus rabies vaccine
	1			Low egg passage, modified live virus rabies vaccine

C

Tissue culture origin rabies vaccine				
1	3		Tissue culture origin rabies vaccine	
1			Tissue culture origin rabies vaccine	
1			Phenol inactivated virus rabies vaccine	
1			High egg passage, modified live virus rabies vaccine	
1	1		Low egg passage, modified live virus rabies vaccine	
1		1	Phenol inactivated virus rabies vaccine	
1			Phenol inactivated virus rabies vaccine	
1	1	1	Modified live virus or phenol inactivated virus rabies vaccine	
2	2		Modified live virus rabies vaccine	
1			High egg passage, modified live virus rabies vaccine	
	1			
1	1			
1	1		Phenol inactivated virus rabies vaccine	
1			High egg passage, modified live virus rabies vaccine	
1			Modified live virus or phenol inactivated virus rabies vaccine	
2	1	2	Modified live virus and inactivated virus rabies vaccine	
4	4		Modified live virus, or phenolized, or tissue culture origin rabies vaccine	
	2			
2	2	2	High egg passage and inactivated virus rabies vaccine	
	1			
1	2		Modified live virus or phenol inactivated virus rabies vaccine	
1				
3	3		Modified live virus or phenol inactivated virus rabies vaccine	
	1			
1	2	3	Modified live virus rabies vaccine	
1			Phenol inactivated virus rabies vaccine	
1				
1	2		Phenol inactivated virus rabies vaccine	
3	3	1	Modified live virus or phenol inactivated virus rabies vaccine	
1	2	3	Phenol inactivated virus rabies vaccine	
3	3		Modified live virus rabies vaccine	
	2	1	2	Phenol inactivated virus rabies vaccine
	6			Modified live virus, or phenolized, or tissue culture origin rabies vaccine
2	2	1	1	
7		8		Modified live virus, or phenolized, or tissue culture origin rabies vaccine
1				
2		3	1	
		3	4	
1				
1	1			
	1	1	2	Type of rabies vaccine not specified
0	1	1	19	- - - - -
0	6	4	3	6 1 - - - - - 1
0	34	- - -	36	- - - 1 - - -
0	1	- - -	1	- - - - -
0	2	- - -	1	- - - 8 - 1
0	- - -	- - -	10	- 12 - 25 - -
0	- - -	1	- - -	- - - - -
0	2	- - 2	- - -	- - - - -
0	- - -	- 3	4	- 4 - - -
0	- - 1	- - -	2	- - - - -
0	2	7	5	4 2 2 3 3 79 1 4 12 8 26 1 1

FIGURE 1. IMMUNIZATIONS RECOMMENDED FOR GOVERNMENT-OWNED ANIMALS

*Total for all species.

**Remarks pertain only to rabies vaccines.

D

Analysis: A total of 39 Veterinary Corps officers responded to this questionnaire. In the case of question 1a, two recommended that immunizations should conform with the provisions of AR 40-655, and the questionnaire from HQ, US Army Pacific, was not completed for this question. This is the explanation for only 36 selections out of a total of 39 responses in the case of such an obvious selection as rabies immunization in the dog. The respondents recommended that Government-owned animals be immunized against a total of 35 diseases. This relatively large number of immunizations was recommended because of the multiplicity of communicable diseases of animals and species of animals which are Government-owned. The majority of the immunizations recommended were for the prevention of host-specific diseases (those that naturally occur in only one species; e.g., infectious canine hepatitis), while a smaller number were for diseases that naturally occur in a wide variety of species, including man (e.g., leptospirosis and rabies). Many of the immunizations recommended were for the prevention of diseases which do not occur in the United States or are relatively uncommon elsewhere or for which the immunizing agent is of limited efficacy; e.g., foot-and-mouth disease and rinderpest (not present in the U.S.). The immunizations recommended by 10 or more respondents were for the prevention of anthrax, brucellosis, canine distemper, equine viral encephalitides, feline panleukopenia, feline pneumonitis, hog cholera, infectious canine hepatitis, leptospirosis, rabies, strangles, and tetanus. All but two of the above (hog cholera and strangles) are immunizations currently prescribed in AR 40-655. The above diseases are relatively common in the United States, and immunizing agents currently in use are efficient. Immunizations selected for further discussion in paragraph 4 of Annex C were those for the prevention of anthrax, brucellosis, canine distemper, equine influenza, equine viral encephalitides, feline panleukopenia, feline pneumonitis, infectious canine hepatitis, leptospirosis, rabies, smallpox (monkeypox), strangles, and tetanus. The above selections were based on incidence in the United States and other areas of the world, their efficacy, species of animals affected, those diseases that are zoonotic, US Department of Agriculture/State regulations, questionnaire responses, those immunizations currently prescribed in AR 40-655, and common communicable diseases of dogs and horses. The dog and horse represent the two "working species" of animals (as opposed to laboratory animals or animals used for experimentation) used by the US Army. Minimum immunization standards for these working species should be more comprehensive than for laboratory animals. Work with the latter group could be invalidated or impaired by some vaccinations. The remarks section of Figure 1 contains comments by respondents concerning specific types of rabies vaccines recommended for use in animals. AR 40-655 currently prescribes specific types of rabies vaccines for use in animals. Veterinary Corps officers are restricted to approved vaccines. In several instances, unapproved vaccines were recommended. Respondents did

not indicate unapproved vaccines were in use, but suggested they be considered for approval and use. This does not indicate a breach of the provisions of AR 40-655 but does indicate a potential problem. This matter was discussed with a representative of the Office of the Assistant for Veterinary Services, Office of The Surgeon General, Department of the Army, Washington, D.C. A notice will be published in the Army Veterinary Corps Information Memorandum as a reminder that only those rabies vaccines authorized by AR 40-655 will be used.

(b) Other animals under military control. (See Figure 2)

Analysis: The term, "other animals under military control" applies to privately-owned animals which are maintained by military or authorized civilian personnel, or animals permitted by lease agreement to graze on a military reservation, or animals permitted on a military reservation for any other purpose. The immunization requirements for these animals would not have to be as strict as for Government-owned animals; however, certain "minimum" requirements would have to be met to adequately protect military personnel and Government-owned animals. The respondees recommended that "other animals under military control" be immunized against a total of 38 diseases (the total selected for question 1a was 35). Immunizations recommended by 10 or more respondees were for the prevention of anthrax, blackleg, brucellosis, canine distemper, equine viral encephalitides, feline panleukopenia, feline pneumonitis, infectious canine hepatitis, leptospirosis, rabies, and tetanus. Immunizations selected for further discussion in paragraph 4 of Annex C were those for the prevention of brucellosis, equine influenza, equine viral encephalitides, leptospirosis, rabies, and strangles.

(2) Question 2. Which diagnostic tests and examinations should be required for the prevention/control of communicable diseases in Government-owned animals and other animals under military control? Please list diseases, specific tests and examination, and frequency of tests and examinations.

(a) Government-owned animals.

IMMUNIZATION AGAINST--DISEASE

Brucellosis						
Malignant edema						
Leptospirosis						
Laryngotracheitis						
Infectious necrotic hepatitis						
Infectious hepatitis						
Infectious canine hepatitis						
Infectious bronchitis						
Infectious bovine rhinotracheitis						
Hog cholera						
Hemorrhagic enterotoxemia						
Fowl pox						
Fowl cholera						
Foot-and-mouth disease						
Feline pneumonitis						
Feline panleukopenia						
Equine virus abortion						
Equine viral encephalitides						
Equine influenza						
Enterotoxemia						
Contagious ecthyma						
Canine distemper						
Brucellosis						
Bovine virus diarrhea						
Bluetongue						
Blackleg						
Bacillary hemoglobinuria						
Anthrax						
Anaplasmosis						

COMMAND	S P E C I E S					
	I M M U N I Z E D					
US Army Japan (1 questionnaire)	Cat					
	Dog					
US Army Alaska (3 questionnaires)	Cat				2	1
	Cow	1	1	1		
	Dog		3			
	Horse			2	3	
	Other animals					
US Army Ryukyu Islands (1 questionnaire)	Cat				1	1
	Dog		1			
	Horse			1		
US Army Support Thailand (1 questionnaire)	Cat				1	
	Dog		1			
	Horse			1		
	Primates(monkeys, etc.)					
HQ US Army Pacific (1 questionnaire)	Cat				1	1
	Dog		1			
	Horse					
Eighth US Army (1 questionnaire)	Cat				1	1
	Cow	1	1			
	Dog			1		
	Goat	1				
	Hog				1	
	Horse	1				
	Poultry				1	
	Sheep	1	1			
US Army Forces Southern Command (1 questionnaire consolidated be- fore submission)	Cow	1	1			
	Sheep			1	1	
US Army Europe (6 questionnaires) 1 questionnaire recommended immu- nization require- ments of AR 40-655	Cat				3	
	Cow	1	1	2		
	Dog			4		
	Goat			1		
	Hog	1		1		
	Horse			1	2	
	Sheep	1		1		
	Primate(monkeys, etc.)					

DISEASE

Vibriosis
Transmissible gastroenteritis
Tetanus
Swine erysipelas
Strangles
Smallpox (monkeypox)
Rinderpest
Rabies
Poliomyelitis
Psittacosis
Newcastle disease
Mink enteritis
Laryngotracheitis
Infectious necrotic hepatitis
Infectious hepatitis
Infectious canine hepatitis

B

REMARKS ON BIOLOGICAL PRODUCTS **

				Inactivated virus rabies vaccine
				Inactivated and live virus rabies vaccine
		3		Modified live virus, or phenolized, or tissue culture origin rabies vaccine
3	3	3	1	Modified live virus and tissue culture origin rabies vaccine
		1	1	Phenol inactivated virus rabies vaccine
		1		Phenol inactivated virus rabies vaccine
1	1	1		Phenol or high egg passage inactivated virus rabies vaccine
		1		Modified live virus rabies vaccine
		1		Phenol inactivated virus rabies vaccine
1	1	1		Modified live virus rabies vaccine
		1		
		1		Inactivated virus rabies vaccine
1	1	1		Inactivated virus rabies vaccine
		1	1	
		1		Phenol inactivated virus rabies vaccine
		1	1	Phenol inactivated virus rabies vaccine
1	1	1		Modified live virus rabies vaccine
		1		Phenol inactivated virus rabies vaccine
		1	1	Phenol inactivated virus rabies vaccine
		1		
		1	1	Phenol inactivated virus rabies vaccine
		1		Inactivated virus rabies vaccine
		1		
		3		Phenolized or tissue culture origin rabies vaccine
3	3	1	1	Modified live virus rabies vaccine
		5		Modified live virus or phenolized, or tissue culture origin rabies vaccine
		1	1	Tissue culture origin rabies vaccine
		1	2	Tissue culture origin rabies vaccine
		1		Tissue culture origin rabies vaccine
		1		Phenol inactivated virus rabies vaccine

1	1	Tissue culture origin rabies vaccine	
1	2	Tissue culture origin rabies vaccine	
1		Tissue culture origin rabies vaccine	
1		Phenol inactivated virus rabies vaccine	
1		Phenol inactivated virus rabies vaccine	
1		High egg passage, modified liver virus rabies vaccine	
1	1	Low egg passage, modified live virus rabies vaccine	
1	1	Phenol inactivated virus rabies vaccine	
2		Phenol inactivated virus rabies vaccine	
1		Type of rabies vaccine not specified	
1	2	Modified live virus rabies vaccine	
1			
1	1	Phenol inactivated virus rabies vaccine	
1		Modified live virus or phenol inactivated virus rabies vaccine	
2	2	Modified live virus and inactivated virus rabies vaccine	
4	4	Modified live virus or phenolized or tissue culture organic rabies vaccine	
2			
2	2	High egg passage and inactivated virus rabies vaccine	
1	1	Phenol inactivated virus rabies vaccine	
1	3	Modified live virus or phenol inactivated virus rabies vaccine	
1	1	Modified live virus rabies vaccine	
3	3	Modified live virus or phenol inactivated virus rabies vaccine	
1			
1	1	Modified live virus rabies vaccine	
1		Phenol inactivated virus rabies vaccine	
1	3	Phenol inactivated virus rabies vaccine	
2	3	Modified live virus or phenol inactivated virus rabies vaccine	
	1		
	2		
1		Type of rabies vaccine not specified	
3		Phenol inactivated virus rabies vaccine	
2		Modified live virus or phenol inactivated virus rabies vaccine	
1	1	Modified live virus rabies vaccine	
1	2	Phenol inactivated virus rabies vaccine	
2		Phenol inactivated virus rabies vaccine	
	6	Modified live virus or phenolized or tissue culture origin rabies vaccine	
5	3	Modified live virus or phenolized or tissue culture origin rabies vaccine	
3	6	Modified live virus or phenolized or tissue culture origin rabies vaccine	
1			
3			
1			
1	2	Modified live virus or phenolized or tissue culture origin rabies vaccine	
1			
1	1	30	
1	7	5	132
1			3
1			35
1			1
1			1
1			2
1			7
1			8
1			9
1			18
1			0
1			1
1			39
1			3
1			2
1			1
1	1	40	81
1	1	53	10
1	1	23	9
1	1	9	7
1	1	0	3

FIGURE 2. IMMUNIZATIONS RECOMMENDED FOR PRIVATELY-OWNED ANIMALS

* Total for all species.
** Remarks pertain only to rabies vaccines.

* Total for all species.

** Remarks pertain only to rabies vaccine.

17

SPECIES	TEST OR EXAMINATION	FREQUENCY
US ARMY JAPAN (One Questionnaire)		
Dog	Filariasis	6 months
Dog	Physical examinations	Not stated
Primates (monkeys, etc.)	Tuberculin test	Not stated
US ARMY ALASKA (Three Questionnaires)		
Cow	Tuberculin test	IAW USDA
Dog	Blood urea nitrogen	6 months
Dog	Complete blood count	6 months
Dog	Fecal examination	1 to 6 months
Dog	Filariasis	6 to 12 months
Dog	Microhematocrit	3 to 6 months
Dog	Physical examination	6 months
Dog	Stool culture	6 months
Dog	Urinalysis	6 months
Horse	Complete blood count	6 months
Horse	Mallein test (enzootic areas only)	When procured
Horse	Microhematocrit	6 months
Horse	Physical examination	6 months
Horse	Urinalysis	6 months
Primates (monkeys, etc.)	Tuberculin test	IAW TB MED 255

IAW - In accordance with

SPECIES	TEST OR EXAMINATION	FREQUENCY
US ARMY, RYUKYU ISLANDS (One Questionnaire)		
Dog	Complete blood count	6 months
Dog	Fecal examination	15 days
Dog	Filariasis	2 months
Dog	Physical examination	6 months
Dog	Urinalysis	6 months
US ARMY SUPPORT, THAILAND (One Questionnaire)		
Cow	Anaplasmosis	When procured
Cow	Brucellosis	When procured
Cow	Fecal examination	Not stated
Cow	Tuberculin test	6 months
Cow	Other tests as required by local conditions	NA
Dog	Fecal examination	1 month
Dog	Filariasis	3-5 months
Dog	Physical examination	6 months
Horse	Fecal examination	Not stated
Horse	Mallein test	When procured
HQ, US ARMY PACIFIC (One Questionnaire)		

No response - Government-owned animals not present in Hawaii

SPECIES	TEST OR EXAMINATION	FREQUENCY
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**EIGHTH US ARMY
(One Questionnaire)**

Dog	Filariasis	6 months
Dog	Observation of rabies suspects	As required
Horse	Mallein test (enzootic areas only)	Annually

**US ARMY FORCES SOUTHERN COMMAND
(One Questionnaire Consolidated Before Submission)**

Dog	External parasites	As required
Dog	Fecal examination	6 months
Dog	Filariasis	6 months
Dog	Leptospirosis (agglutination)	12 months
Dog	Tuberculosis	12 months
Horse	External parasites	As required
Horse	Fecal examination	As required
Horse	Mallein test	12 months
Primates (monkeys, etc.)	Blood parasites	As required
Primates	Fecal examination	As required
Primates	Histoplasmosis	As required
Primates	Tuberculin test	6 months

**US ARMY EUROPE
(Six Questionnaires)**

Cow	Brucellosis test	Before entry on military reservation
Cow	Tuberculin test	Before entry on military reservation

SPECIES	TEST OR EXAMINATION	FREQUENCY
Dog	External parasites	As required
Dog	Fecal examination	1 to 12 months
Dog	Filariasis	6 months
Dog	Leptospirosis (agglutination)	As required
Horse	Mallein test	On receipt and annually thereafter
Primates (monkeys, etc.)	Tuberculin test	Annually

**HQ, USCONARC
(One Questionnaire)**

Cat	External parasites	Not stated
Cat	Fecal examination	Not stated
Cow	Brucellosis test	Not stated
Cow	External parasites	Not stated
Cow	Fecal examination	Not stated
Cow	Tuberculin test	Not stated
Dog	External parasites	Not stated
Dog	Filariasis	Not stated
Dog	Fecal examination	Not stated
Horse	External parasites	Not stated
Horse	Fecal examination	Not stated
Horse	Mallein test	Not stated

**THIRD US ARMY
(Two Questionnaires)**

Cat	External parasites	1 month
Cat	Fecal examination	1 month

SPECIES	TEST OR EXAMINATION	FREQUENCY
Cat	Physical examination	1 month
Cow	Brucellosis	As required
Cow	Fecal examination	6 months
Cow	Physical examination	6 months
Cow	Tuberculin test	IAW AR 40-655
Dog	External parasites	1 month
Dog	Fecal examination	1 to 3 months
Dog	Filariasis	3 to 6 months
Dog	Physical examination	1 month
Horse	Fecal examination	1 month
Horse	Mallein test	IAW AR 40-655
Horse	Physical examination	1 month
Primates (monkeys, etc.)	Fecal examination	As required
Primates (monkeys, etc.)	Tuberculin test	2 to 3 months
Other species	Fecal examination and physical examination	As required

**FOURTH US ARMY
(Four Questionnaires)**

Cow	Anaplasmosis	Upon arrival
Cow	Brucellosis	Annually
Cow	External parasites	As required
Cow	Leptospirosis	Not stated
Cow	Tuberculin test	IAW USDA

SPECIES	TEST OR EXAMINATION	FREQUENCY
Dog	Complete blood count	As required
Dog	External parasites	As required
Dog	Fecal examination	1 to 6 months
Dog	Filariasis	Annually
Dog	Leptospirosis (agglutination test)	Not stated
Dog	Urinalysis	As required
Goats	Anaplasmosis	Upon arrival
Goats	Brucellosis	Annually
Goats	External parasites	As required
Goats	Leptospirosis	Not stated
Goats	Tuberculin test	LAW USDA
Primates (monkeys, etc.)	External parasites	6 months
Primates (monkeys, etc.)	Fecal examination	6 months
Primates (monkeys, etc.)	Filariasis	6 months
Primates (monkeys, etc.)	Stool culture	6 months
Primates (monkeys, etc.)	Throat culture	As required
Primates (monkeys, etc.)	Tuberculin test	1 month

SPECIES	TEST OR EXAMINATION	FREQUENCY
Horse	External parasites	As required
Horse	Fecal examination	As required
Horse	Mallein test (in enzootic areas)	As required

FIFTH US ARMY
(Three Questionnaires)

Cow	Brucellosis	As required
Cow	Tuberculin test	As required
Dog	External parasites	6 months
Dog	Fecal examination	3 to 6 months
Dog	Filariasis	3 to 6 months
Dog	Leptospirosis	As required
Dog	Physical examination	6 months
Horse	External parasites	As required
Horse	Fecal examination	3 months
Horse	Mallein test (outside US)	Annually
Primates (monkeys, etc.)	External parasites	6 months
Primates (monkeys, etc.)	Fecal examination	3 months
Primates (monkeys, etc.)	Tuberculin test	Annually
Other species	As determined by the Veterinarian	

SPECIES	TEST OR EXAMINATION	FREQUENCY
SIXTH US ARMY (Three Questionnaires)		
Cat	External parasites	Not stated
Cat	Fecal examination	Not stated
Cow	Brucellosis	As required
Cow	Tuberculin test	As required
Dog	Blood urea nitrogen	Not stated
Dog	Complete blood count	Not stated
Dog	External parasites	Not stated
Dog	Fecal examination	3 to 6 months
Dog	Filariasis	3 to 6 months
Dog	Observation of rabies suspects	As required
Dog	Physical examination	As required
Dog	Urinalysis	Not stated
Horse	Fecal examination	Not stated
Horse	Mallein test	Not stated
US ARMY MED DEPT VETERINARY SCHOOL (Three Questionnaires)		
Dog	Fecal examination	1 to 3 months
Dog	Filariasis	3 months
Horse	Fecal examination	3 months
US ARMY MED RSCH AND DEV CMD (Eight Questionnaires)		
Cat	Fecal examination	2-3 months

SPECIES	TEST OR EXAMINATION	FREQUENCY
Cat	Observation for rabies	As required
Cow	Anaplasmosis	Annually
Cow	Brucellosis	Annually or IAW USDA
Cow	Fecal examination	As required
Cow	Leptospirosis (agglutination)	Annually
Cow	Tuberculin test	Annually or IAW USDA
Dog	External parasites	As required
Dog	Fecal examination	2 to 12 months
Dog	Filariasis	6 to 12 months
Dog	Observation for rabies	As required
Dog	Physical examination	Not stated
Dog	Stool culture	Upon receipt
Dog	Tuberculin test	Not stated
Horse	Fecal examination	Not stated
Horse	Mallein test (outside of US)	IAW AR 40-655
Primates (monkeys, etc.)	Fecal examination	2-3 months
Primates (monkeys, etc.)	Filariasis	Upon receipt
Primates (monkeys, etc.)	Stool culture	Upon receipt
Primates (monkeys, etc.)	Throat culture	Upon receipt
Primates (monkeys, etc.)	Tuberculin test	1 to 3 months

Analysis: The comments were consolidated by command when more than one questionnaire was returned. Certain tests which are relatively uncommon were omitted. All tests/examinations listed above are of recognized efficacy as diagnostic aids in the prevention/control of communicable diseases of animals. Descriptive rather than specific titles were used for many of the tests. As an example, a common test recommended for dogs was for filariasis. The Knott's test is widely used in the diagnosis of canine filariasis; however, the test listed above was for filariasis rather than the Knott's test. This was done because there may be several recognized tests which are used in the diagnosis of a disease. The frequency at which the various tests and examinations were recommended varied widely. This is explained by the incidence of a particular disease in the area of assignment of the respondee. Canine filariasis (other than in recently imported dogs) would not be a problem in Alaska, whereas it would be a disease of major importance in an area such as the Ryukyu Islands. The recommended testing frequency for canine filariasis was 6 to 12 months for Alaska and every 2 months for the Ryukyu Islands. The tests and examinations most frequently recommended were brucellosis test, external parasites (examination for), fecal examination, canine filariasis, mallein test, physical examination, and tuberculin test. Requirements as to frequency, species, etc., for the above tests and examinations will be discussed in paragraph 4 of Annex C.

(b) Other animals under military control.

SPECIES	TEST OR EXAMINATION	FREQUENCY
US ARMY JAPAN (One Questionnaire)		
Dog and others	Observation of rabies suspects	As required
US ARMY ALASKA (Three Questionnaires)		
Dog and others	Fecal examination	Annually
Dog and others	Physical examination	Annually
US ARMY RYUKYU ISLANDS (One Questionnaire)		
Dog	Fecal examination	First visit for vaccination and annually

SPECIES	TEST OR EXAMINATION	FREQUENCY
Dog	Filariasis	Annually
Dog	Physical examination	Annually
US ARMY SUPPORT THAILAND (One Questionnaire)		
Same as response in question 2(a)		
HQ, US ARMY PACIFIC (One Questionnaire)		
Dog	External parasites	As required
Dog	Fecal examination	6 months
Dog	Filariasis	6 months
Dog	Leptospirosis	As required
Dog	Observation for rabies	As required
Primates (monkeys, etc.)	Tuberculin test	Annually
EIGHTH US ARMY (One Questionnaire)		
Cow	Anaplasmosis	Annually
Cow	Brucellosis	Annually or IAW USDA
Cow	Tuberculin test	Annually or IAW USDA
Horse	Mallein test	Annually
US ARMY FORCES SOUTHERN COMMAND (One Questionnaire Consolidated before Submission)		
Cow	Anaplasmosis	As required
Cow	Brucellosis	6 months
Cow	Tuberculosis	Annually

SPECIES	TEST OR EXAMINATION	FREQUENCY
	US ARMY EUROPE (Six Questionnaires)	
	Generally recommended same tests and frequency as in question 2(a)	
	HQ, USCONARC (One Questionnaire)	
	Same as response in question 2(a)	
	THIRD US ARMY (Two Questionnaires)	
Cow	Brucellosis	IAW AR 40-655 or USDA
Cow	Tuberculin test	
Horse	Same as response in queation 2(a) if stabled with Government-owned horses	
Primates (monkeys, etc.)	Tuberculin test	Annually
Wildlife	See discussion in analysis of question 4	
	FOURTH US ARMY (Four Questionnaires)	
	Generally recommended same tests and frequency as in question 2(a)	
	FIFTH US ARMY (Three Questionnaires)	
	Generally recommended same tests and frequency as in question 2(a)	
	SIXTH US ARMY (Three Questionnaires)	
	Generally recommended same tests and frequency as in question 2(a)	

SPECIES	TEST OR EXAMINATION	FREQUENCY
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**US ARMY MED DEPT VETERINARY SCHOOL
(Three Questionnaires)**

Cow	Brucellosis	Annually
Cow	Tuberculosis	Annually
Dog	Fecal examination	Annually
Horse	Mallein test (outside of US)	Annually
Primates (monkeys, etc.)	Tuberculin test	Annually

**US ARMY MED RSCH AND DEV CMD
(Eight Questionnaires)**

Cow	Brucellosis	Annually or IAW USDA
Cow	Tuberculin test	Annually or IAW USDA
Horse	Mallein test (outside of US)	IAW AR 40-655
Primates (monkeys, etc.)	Tuberculin test	3 month
Sheep and goats	Brucellosis	Not stated

Analysis: A significantly smaller number of diagnostic tests and examinations were recommended for other animals under military control. The tests and examinations most frequently recommended in question 2(a) were also those most frequently recommended in 2(b). They will be discussed further in paragraph 4 of Annex C.

(3) Question 3. Which procedures governing the movement and control of animals should be required for the prevention/control of communicable diseases in Government-owned animals and other animals under military control?

(a) Government-owned animals.

SPECIES**PROCEDURES GOVERNING MOVEMENT/CONTROL OF ANIMALS****US ARMY JAPAN
(One Questionnaire)**

All Physical examination prior to movement from command.

Dog Daily prophylactic chemotherapy for heartworms during mosquito season in enzootic areas.

**US ARMY ALASKA
(Three Questionnaires)**

All Quarantine of rabies suspects (10 days).

All Physical examination prior to movement from command.

All Quarantine of animals upon arrival in command.

All Compliance with all Government, State and foreign regulations governing the movement/control of animals.

**US ARMY RYUKYU ISLANDS
(One Questionnaire)**

All Physical examination prior to movement from command.

All Quarantine of animals upon arrival in command.

**US ARMY SUPPORT THAILAND
(One Questionnaire)**

All Physical examination prior to movement from command.

**HQ, US ARMY PACIFIC
(One Questionnaire)**

No response - Government-owned animals not present in Hawaii.

SPECIES

PROCEDURES GOVERNING MOVEMENT/CONTROL OF ANIMALS

EIGHTH US ARMY
(One Questionnaire)

- All Physical examination prior to purchase.
- All Quarantine upon arrival following purchase.
- All Physical examination prior to movement from command.

US ARMY FORCES SOUTHERN COMMAND
(One Questionnaire Consolidated Before Submission)

- All Physical examination prior to movement from command.
- All Compliance with all Government, State and foreign regulations governing the movement/control of animals.

US ARMY EUROPE
(Six Questionnaires)

- All Physical examination prior to movement from command.
- All Quarantine of animals demonstrating symptoms of communicable diseases.
- All Quarantine of animals upon arrival from an area where a communicable disease is enzootic.
- All Dipping or spraying animals to remove external parasites.
- All Compliance with all Government, State and foreign regulations governing the movement/control of animals.

HQ USCONARC
(One Questionnaire)

- All Quarantine of animals upon arrival in command.
- All Compliance with all Government, State and foreign regulations governing the movement/control of animals.

SPECIES**PROCEDURES GOVERNING MOVEMENT/CONTROL OF ANIMALS****THIRD US ARMY
(Two Questionnaires)**

All Physical examination prior to movement from command.

All Quarantine of animals upon arrival in command.

All Compliance with all Government, State and foreign regulations governing the movement/control of animals.

**FOURTH US ARMY
(Four Questionnaires)**

All Physical examination prior to movement from command.

All Quarantine of animals upon arrival in command.

All Compliance with all Government, State and foreign regulations governing the movement/control of animals.

All Movement of psittacine birds should conform with the quarantine and medication requirements of the US Public Health Service.

**FIFTH US ARMY
(Three Questionnaires)**

All Physical examination prior to movement from command.

All Quarantine of animals upon arrival in command.

All Compliance with all Government, State and foreign regulations governing the movement/control of animals.

All Prompt notification of responsible veterinarian of any signs of illness in animals.

**SIXTH US ARMY
(Three Questionnaires)**

All Physical examination prior to movement from command.

All Strict compliance with immunization requirements.

SPECIES PROCEDURES GOVERNING MOVEMENT/CONTROL OF ANIMALS

US ARMY MED DEPT VETERINARY SCHOOL
(Three Questionnaires)

All Physical examination prior to movement from command.
All Quarantine of animals upon arrival in command.

US ARMY MED RSCH AND DEV COMD
(Eight Questionnaires)

All Physical examination prior to movement from command.
All Strict compliance with immunization requirements.
All Quarantine of animals upon arrival in command.
All Compliance with all Government, State and foreign regulations governing the movement/control of animals.
All Quarantine and isolation (or eradication as applicable) of animals exhibiting signs of communicable diseases.
All When practical, eradication or elimination of vectors of communicable diseases.

Analysis: The comments were consolidated by command when more than one questionnaire was returned. Certain related comments were consolidated. For example, the steps required to move an animal from a command include: administration of required immunizations, conducting a physical examination, and the preparation of a health certificate. The comment, "physical examination prior to movement from command" generally includes all measures required to prepare the animal(s) for movement. Comments were edited to present standard wording when listed more than one time. Others were omitted so as to present only those considered to be most pertinent. Comments selected for further discussion are:

1. Physical examination prior to movement from command.

Discussion: Currently provided for in AR's 40-655 and 40-905 and included in the proposed revision of AR 40-655 at Annex D.

2. Daily prophylactic chemotherapy for heartworms during mosquito season in enzootic areas.

Discussion: The incidence of canine filariasis varies considerably from area to area. Prophylactic chemotherapy would be desirable in some areas and unnecessary in others. This problem must be resolved on a local basis. Authority for this treatment is currently contained in AR 40-655, and this matter is specifically addressed in the proposed revision to AR 40-655 at Annex D. The preferred course of action is to make such treatment optional.

3. Quarantine of rabies suspects (10 days).

Discussion: This provision is currently contained in AR 40-655 and the proposed revision at Appendix D.

4. Quarantine of animals upon arrival in the command.

Discussion: Currently provided for in AR's 40-905 and 40-655 and included in the proposed revision to AR 40-655 at Annex D.

5. Compliance with all US Government, State and foreign regulations governing the movement/control of animals.

Discussion: Currently provided for in AR's 40-905 and 40-655 and included in the proposed revision to AR 40-655 at Annex D.

6. Physical examination prior to purchase.

Discussion: Currently provided for in AR's 40-905 and 715-31.

7. Quarantine upon arrival following purchase.

Discussion: Currently provided for in AR 40-905.

8. Quarantine of animals demonstrating symptoms of communicable diseases.

Discussion: Currently provided for in AR's 40-655 and 40-905 and included in the proposed revision to AR 40-655 at Annex D.

9. Quarantine of animals upon arrival from an area where a communicable disease is enzootic.

Discussion: Currently provided for in AR's 40-655 and 40-905 and included in the proposed revision to AR 40-655 at Annex D.

10. Dipping or spraying animals to remove external parasites.

Discussion: This is an accepted procedure for the removal of external parasites. There is no requirement to publish in regulations those obvious and accepted procedures.

11. Movement of psittacine birds should conform with the quarantine and medication requirements of the US Public Health Service.

Discussion: The control of the entry of psittacine birds into the US is addressed in AR 40-12; however, the depth of coverage is considered inadequate. This is a proper subject for coverage in AR 40-655 and accordingly has been included in the proposed revision at Annex D.

12. Prompt notification of responsible veterinarian of any signs of illness in animals.

Discussion: It is important that illness in animals be reported to the responsible veterinarian. Enlisted veterinary personnel and animal handlers are so instructed. This is a matter which does not have to be specifically addressed in the revision to AR 40-655.

13. Strict compliance with immunization requirements.

Discussion: Mandatory immunizations are prescribed in AR 40-655 and in the proposed revision thereto. In addition to mandatory immunizations, the veterinarian is authorized to immunize against such other diseases as would be warranted by local conditions.

14. Quarantine and isolation (or eradication, as applicable) of animals exhibiting signs of communicable diseases.

Discussion: Currently provided for in AR's 40-655 and 40-905 and included in the proposed revision to AR 40-655 at Annex D.

15. When practical, eradication or elimination of vectors of communicable diseases.

Discussion: This is certainly a desirable objective and is provided for in AR's 40-5 and 40-655 and is included in the proposed revision to AR 40-655 at Annex D.

(b) Other animals under military control.

SPECIES	PROCEDURES GOVERNING MOVEMENT/CONTROL OF ANIMALS
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US ARMY JAPAN
(One Questionnaire)

All Privately-owned animals maintained on a military reservation should be effectively restrained and cared for so as not to be a problem in disease transmission or injury to humans.

US ARMY ALASKA
(Three Questionnaires)

All Quarantine of rabies suspects (10 days).

All Physical examination prior to movement from command.

All Compliance with all Government, State and foreign regulations governing the movement/control of animals.

All Registration of all animals maintained on a military reservation.

All Strict compliance with immunization requirements.

All Program to apprehend stray animals.

All Limitation of animals to one pet per household.

All Limiting of on-post veterinary care to immunizations only and referring all sick animals to a civilian practitioner for treatment. (This procedure would aid in limiting the number of animals on the post)

All Allowing no breeding of animals on post.

SPECIES

PROCEDURES GOVERNING MOVEMENT/CONTROL OF ANIMALS

US ARMY RYUKYU ISLANDS
(One Questionnaire)

All Physical examination upon arrival in or departure from command.

All Quarantine of animals upon arrival in command.

All Registration of all animals maintained on a military reservation.

US ARMY SUPPORT THAILAND
(One Questionnaire)

All Physical examination prior to movement from command.

HQ US ARMY PACIFIC
(One Questionnaire)

All Compliance with all Government, State, and foreign regulations governing the movement/control of animals.

EIGHTH US ARMY
(One Questionnaire)

All Compliance with all Government, State, and foreign regulations governing the movement/control of animals.

US ARMY FORCES SOUTHERN COMMAND
(One Questionnaire Consolidated Before Submission)

All Physical examination prior to movement from command.

All Compliance with all Government, State, and foreign regulations governing the movement/control of animals.

US ARMY EUROPE
(Six Questionnaires)

All Physical examination prior to movement from command.

All Quarantine of animals demonstrating symptoms of communicable diseases.

All Quarantine of animals upon arrival from an area where a communicable disease is enzootic.

SPECIES

PROCEDURES GOVERNING MOVEMENT/CONTROL OF ANIMALS

All Dipping or spraying animals to remove external parasites.

All Compliance with all Government, State, and foreign regulations governing the movement/control of animals.

All Strict compliance with immunization requirements.

HQ USCONARC
(One Questionnaire)

All Compliance with all Government, State, and foreign regulations governing the movement/control of animals.

THIRD US ARMY
(Two Questionnaires)

All Physical examination prior to movement from command.

All Compliance with all Government, State, and foreign regulations governing the movement/control of animals.

FOURTH US ARMY
(Four Questionnaires)

All Physical examination prior to movement from command.

All Compliance with all Government, State, and foreign regulations governing the movement/control of animals.

All Movement of psittacine birds should conform with the quarantine and medication requirements of the US Public Health Service.

FIFTH US ARMY
(Three Questionnaires)

All Physical examination prior to movement from command.

All Require all pets to be on leash or under voice control while on a military reservation.

All Investigation of all bite incidents and observation/quarantine of animals involved.

All Quarantine of horses upon arrival in command (those to be maintained on a military reservation).

SPECIES**PROCEDURES GOVERNING MOVEMENT/CONTROL OF ANIMALS****All**

Compliance with all Government, State, and foreign regulations governing the movement/control of animals.

**SIXTH US ARMY
(Three questionnaires)****All**

Strict compliance with immunization requirements.

All

Physical examination prior to movement from command.

All

Registration of all animals maintained on a military reservation.

All

Program to apprehend stray animals.

All

Require all pets to be on a leash or under voice control while on a military reservation.

All

Compliance with all Government, State, and foreign regulations governing the movement/control of animals.

**US ARMY MED DEPT VETERINARY SCHOOL
(Three Questionnaires)****Cow & Horse**

Quarantine of cattle and horses to be maintained on a military reservation.

All

Strict compliance with immunization requirements.

All

Physical examination prior to movement from command.

All

Compliance with all Government, State, and foreign regulations governing the movement/control of animals.

All

Dipping or spraying of animals to control external parasites.

**US ARMY MED RSCH AND DEV COMMAND
(Eight Questionnaires)****All**

Physical examination prior to movement from command.

All

Strict compliance with immunization requirements.

Cow

Cattle should have negative test results for brucellosis and tuberculosis before being maintained on a military reservation.

SPECIES PROCEDURES GOVERNING MOVEMENT/CONTROL OF ANIMALS

All Quarantine and isolation (or eradication, as applicable) of animals exhibiting signs of communicable diseases.

All When practical, eradication or elimination of vectors of communicable diseases.

Analysis: As in question 3a, the comments were consolidated by command, when more than one questionnaire was returned. Many of the comments were identical to those enumerated in the analysis of question 3a. Comments pertaining to privately-owned animals which were selected for further discussion are:

1. Privately-owned animals maintained on a military reservation should be effectively restrained and cared for so as not to be a problem in disease transmission or injury to humans.

Discussion: General guidance on this matter is contained in AR 40-655 and the proposed revision thereto. Detailed coverage is best left to local regulations. The post regulations reviewed in conjunction with this study effectively dealt with this problem.

2. Registration of all animals maintained on a military reservation.

Discussion: Detailed control measures should be left to local regulations. This matter was adequately covered in the local regulations reviewed.

3. Program to apprehend stray animals.

Discussion: See 2, above.

4. Limitation of animals to one pet per household.

Discussion: See 2, above.

5. Limiting of on-post veterinary care to immunizations only and referring all sick animals to a civilian practitioner. (This procedure would aid in limiting the number of animals on the post.)

Discussion: The extent of veterinary care to be provided for privately-owned animals must be determined on a local level. Each post will vary as to the number of Army Veterinary Service personnel, the number of privately-owned animals, and the distance from civilian veterinarians. The commander must determine the manner in which his resources are most effectively utilized.

6. Allowing no breeding of animals on post.

Discussion: See 2, above.

7. Require all pets to be on leash or under voice control while on a military reservation.

Discussion: See 2, above.

8. Investigation of all bite incidents and observation/quarantine of animals involved.

Discussion: Currently provided for in AR 40-655 and the proposed revision thereto.

9. Quarantine of cattle and horses to be maintained on a military reservation.

Discussion: Currently provided for in AR's 40-655 and 40-905. The type of quarantine and duration should be determined locally.

10. Cattle should have negative test results for brucellosis and tuberculosis before being maintained on a military reservation.

Discussion: Testing for tuberculosis is currently required in AR 40-655, while the proposed revision requires testing for both brucellosis and tuberculosis.

(4) Question 4. Which procedures, in addition to those presented in questions 1, 2, and 3, above, are specifically required to detect, prevent, and control those communicable diseases of animals transmissible to man?

SPECIES

PROCEDURES OTHER THAN IN 1, 2, AND 3

US ARMY JAPAN
(One Questionnaire)

All Timely and accurate diagnostic capability for rabies.

US ARMY ALASKA
(Three Questionnaires)

All A zoonotic disease control program written for each specific military post or location.

All A comprehensive preventive medicine program.

SPECIES

PROCEDURES OTHER THAN IN 1, 2, AND 3

US ARMY RYUKYU ISLANDS
(One Questionnaire)

All Cooperation with human health facilities in cross-reporting zoonotic diseases.

All Control of stray animals.

All Wildlife study and control.

US ARMY SUPPORT THAILAND
(One Questionnaire)

All Routine monthly coordination with local health officials to determine disease problems and prevalence.

All In oversea areas, coordination with municipal health authorities in development of a program to control zoonotic diseases.

HQ US ARMY PACIFIC
(One Questionnaire)

Referred to inclosed Fort Shafter post regulation which contained provisions for a comprehensive zoonotic disease control program.

EIGHTH US ARMY
(One Questionnaire)

All Communicable diseases of animals transmissible to man must be reported as outlined in current regulations and directives.

All All immunizations, diagnostic tests, and physical examinations should be administered by or performed under the direct supervision of a Veterinary Corps officer.

All Anthrax - strict quarantine of infected premises; prompt disposal of dead animals by cremation or deep burial under a layer of quick-lime.

All Tuberculosis and brucellosis - quarantine of infected premises; slaughter of positive animals.

All Psittacosis - strict quarantine of birds in infected aviaries. Physical examination must be performed immediately prior to shipment.

SPECIES

PROCEDURES OTHER THAN IN 1, 2, AND 3

All Animal handlers and veterinarians working directly with animals should receive pre-exposure immunization against rabies.

US ARMY FORCES SOUTHERN COMMAND
(One Questionnaire Consolidated Before Submission)

All Excess laboratory animals should be destroyed or transferred to another laboratory and should never be donated to students, high schools, etc., because of their disease transmission potential.

All Pet owners should be educated concerning the risks involved in keeping pets.

US ARMY EUROPE
(Six Questionnaires)

All Control of rodents and other pests which may act as reservoirs of communicable diseases.

All Control of insects which may act as vectors of communicable diseases.

All Require thorough cooking of all meats.

All Require inspection of all meats.

All Require sanitary inspection of establishments in which food is processed or prepared.

Dog Proper sanitation of areas where dogs are maintained.

Hog Require thorough cooking of garbage fed to hogs.

All Require proper pasteurization of dairy products.

All Proper disposal of animals carcasses.

All Proper control measures for psittacine birds.

All Control of stray animals.

SPECIES PROCEDURES OTHER THAN IN 1, 2, AND 3

HQ USCONARC
(One Questionnaire)

Cows & Horses Testing of horses and cattle for leptospirosis.

All Daily observation of rabies suspects by a veterinarian.

THIRD US ARMY
(Two Questionnaires)

All Provided four inclosures from HQ Third US Army and Fort Benning, Ga., which address pet control, control of rabies, and control of zoonotic diseases. (One of the inclosures from Fort Benning will be discussed in Annex C.)

FOURTH US ARMY
(Four Questionnaires)

All Enforcement of strict sanitary practices in stables, kennels, etc.

All Control of insects, rodents, etc.

All Restricting areas where Government-owned animals are maintained.

All Immunization of military animals, animal handlers, and veterinarians.

All Ensure that the command is aware of animal health regulations and quarantine requirements when personnel/animals are moved into or out of areas where reportable animal diseases are known to exist.

All Control of stray animals.

FIFTH US ARMY
(Three Questionnaires)

All Cooperation with civilian health agencies in reporting zoonotic diseases.

All Conduct wildlife surveys to determine incidence of zoonotic diseases.

All Establish a zoonotic disease control facility (veterinary clinic) on each post.

SPECIES **PROCEDURES OTHER THAN IN 1, 2, AND 3**

- All Establish procedures to prevent contact between domestic and wild animals. (Establish through control of stray animals and enforcement of leash requirements.)
- All Training of animal handlers in sanitation and to report sick animals to the veterinarian.
- All Inspection of facilities where animals are maintained.

SIXTH US ARMY
(Three Questionnaires)

- All Require annual physical examinations for all animals maintained on a military reservation.
- All Control of stray animals.
- All Control of wild animal population.
- All Preparation of all required reports and compilation of statistical data.
- All Medical laboratories should be staffed so as to be capable of providing diagnostic and consultative services related to the control of zoonotic diseases.

US ARMY MED DEPT VETERINARY SCHOOL
(Three Questionnaires)

- All Animals should be examined and held in quarantine upon arrival at a military reservation.

US ARMY MED RSCH AND DEV COMMAND
(Eight Questionnaires)

- All Strict sanitary control procedures should always be followed.
- All A post-mortem examination should be performed on any animal that dies, regardless of cause, and tissue specimens should be submitted to a laboratory.
- All Laboratory support in the diagnosis of leptospirosis.
- All Control of insects and stray and wild animals.
- All Control of disease vectors.

SPECIES PROCEDURES OTHER THAN IN 1, 2, AND 3

- All Identification of reservoirs and carrier animals.
- All Strict compliance with immunization and testing requirements.
- All Quarantine of new arrivals and compliance with special importation requirements.
- All Establish a public relation and educational campaign to create an awareness of zoonotic diseases.
- All Prophylactic chemotherapy of both Government-owned and privately-owned psittacine birds.
- All Survey for detection of zoonotic diseases in both domestic and wild animals.

Analysis: The comments were consolidated by command when more than one questionnaire was returned. Certain related comments were consolidated. Comments were edited to present standard wording when listed more than one time. Others were omitted so as to present only those considered to be the most pertinent. All of the comments presented above would be of value in the control of zoonotic diseases. Some were identical to those in Question 3. This was to be expected because there would be certain common measures for the control of communicable diseases of animals, irrespective of their transmissibility to man. Comments selected for further discussion are:

(a) Timely and accurate diagnostic capability for rabies.

Discussion: Laboratory support in the diagnosis of rabies is essential. Such support is provided by Army Medical Department laboratories.

(b) A zoonotic disease control program written for each specific military post or location.

Discussion: Currently provided for in AR 40-655 and the proposed revision thereto.

(c) A comprehensive preventive medicine program.

Discussion: Currently provided for in AR 40-5.

(d) Cooperation with human health facilities in cross-reporting zoonotic diseases.

Discussion: Currently provided for in AR 40-655 and the proposed revision thereto. Details for such programs must be established locally and published in local regulations.

(e) Routine monthly coordination with local health officials to determine disease problems and prevalence.

Discussion: See (d), above.

(f) In oversea areas, coordination with municipal health authorities in development of a program to control zoonotic diseases.

Discussion: Such coordination is currently provided for in AR 40-655 and the proposed revision thereto, irrespective of whether in CONUS or oversea areas.

(g) Communicable diseases of animals transmissible to man must be reported as outlined in current regulations and directives.

Discussion: Currently provided for in AR's 40-417 and 40-655, and is included in the proposed revision to AR 40-655 at Annex D.

(h) All immunizations, diagnostic tests, and physical examinations should be administered by or performed under the direct supervision of a Veterinary Corps officer.

Discussion: Currently provided for by AR 40-655; however, the revision has been reworded to require that the veterinarian be physically present at the location where immunizing agents are being administered.

(i) Animal handlers and veterinarians working directly with animals should receive pre-exposure immunization against rabies.

Discussion: AR 40-5 grants the surgeon of a command authority to prescribe such immunizations as are required for the protection of the command. Immunization against rabies must be determined on a local level. The incidence of rabies will vary from area to area, and immunization against rabies will not be required by all animal handlers and veterinarians.

(j) Pet owners should be taught the risks involved in keeping pets.

Discussion: It is common knowledge that humans can contract communicable diseases from animals. Any unusual disease problems should be managed through publicity on a local level. An example--the daily bulletin to announce the presence of rabies in wild animals.

(k) Control of rodents, insects, and other pests which may act as reservoirs or vectors of communicable diseases.

Discussion: This is an essential adjunct to the prevention and control of communicable diseases of animals and is provided for in AR's 40-5 and 40-655 and is included in the proposed revision of AR 40-655 at Annex D.

(l) Require thorough cooking of all meats.

Discussion: Currently provided for by TM's 10-412 and 10-419.

(m) Require inspection of all meats.

Discussion: Currently provided for by AR's 40-5 and 40-657.

(n) Require sanitary inspection of establishments in which food is processed or prepared.

Discussion: Currently provided for by AR's 40-5 and 40-657.

(o) Require thorough cooking of garbage fed to hogs.

Discussion: Currently provided for by AR 755-20.

(p) Require proper pasteurization of dairy products.

Discussion: Currently provided for by AR 40-5.

(q) Require proper disposal of animal carcasses.

Discussion: This is an accepted principle of sanitation. While not specifically covered in AR 40-5, its provisions require that this and all other accepted principles of sanitation be complied with.

(r) Testing of horses and cattle for leptospirosis.

Discussion: The incidence of leptospirosis varies from area to area. Routine testing of horses and cattle for leptospirosis would be desirable in some areas while it would be unnecessary in others. AR 40-655 and its proposed revision provide for such testing; it can be accomplished if required. The necessity for testing for leptospirosis must be determined locally.

(s) Daily observation of rabies suspects by a veterinarian.

Discussion: Currently provided for in AR 40-655 and the proposed revision thereto.

(t) Restricting areas where Government-owned animals are maintained.

Discussion: This is a desirable practice, and Government-owned animals are normally maintained so as to preclude contact with privately-owned animals. AR 40-655 and the proposed revision thereto are so worded that Government-owned animals can be maintained in restricted areas.

(u) Insure that the command is aware of animal health regulations and quarantine requirements when personnel/animals are moved into or out of areas where reportable animal diseases are known to exist.

Discussion: This is an essential practice and is provided for in AR 40-655 and the proposed revision thereto.

(v) Conduct wildlife surveys to determine incidence of zoonotic diseases.

Discussion: Surveys for the detection of zoonotic diseases in wild animals and the adoption of measures for the control of wild animals are essential components of a zoonotic disease control program. This subject is addressed in AR's 40-5, 40-655, 420-10, and 420-76. Army Veterinary Service personnel should have an active role in programs involving surveys/control of wild animals. AR 40-655 has been revised to specifically include veterinary personnel in these programs. (See Tab B for an example of participation by veterinary personnel in such programs.) It must be recognized that these programs should be established and administered on a local basis.

(w) Establish a zoonotic disease control facility (veterinary clinic) at each post.

Discussion: The establishment of a veterinary clinic and the services to be performed fall within the prerogatives of the commander. A zoonotic disease control facility is normally established at any post where a Veterinary Corps officer is assigned.

(x) Control of wild animal population.

Discussion: See (v), above.

(y) A post-mortem examination should be performed on any animal that dies, regardless of cause, and tissue specimens should be submitted to a laboratory.

Discussion: Such a practice must be determined locally. The usual practice is to perform a post-mortem examination on Government-owned animals. The request for supporting laboratory services would be influenced by the post-mortem examination findings and the availability of laboratory services.

(z) Establish a public relations and educational campaign to create an awareness of zoonotic diseases.

Discussion: The necessity of such a campaign must be determined locally. The scope of the campaign would naturally be influenced by the zoonotic disease incidence in the area.

(aa) Prophylactic chemotherapy of both Government-owned and privately-owned psittacine birds.

Discussion: Previously discussed under question 3a. A program for prophylactic chemotherapy of psittacine birds has been included in the revision of AR 40-655 at Annex D.

(bb) Surveys for detection of zoonotic diseases in both domestic and wild animals.

Discussion: Surveys of this nature must be established and managed on a local level. Wildlife surveys have been discussed in (v), above. Surveys in domestic animals would normally be conducted as dictated by the zoonotic disease incidence in the area.

(5) Question 5. Do you have a regulation(s) in your area related to the prevention/control of communicable diseases in animals? If so, please provide a copy.

Analysis: The purpose of this question was to obtain copies of local regulations which would provide background information for this study. All regulations received established effective programs for the prevention/control of communicable diseases in animals.

(6) Question 6. Other comments. (Should include, but not be limited to, special control procedures for vectors and wild animals; also, any special considerations for the prevention/control of communicable diseases in laboratory animals.)

SPECIES	OTHER COMMENTS
US ARMY JAPAN (One Questionnaire)	
All	Consideration must be given to known prevalence or absence of disease in an area and acceptability of certain immunizing agents in the area.
All	Disease control measures in laboratory animals must be oriented so as not to interfere unduly with the studies for which the animals are being used.
US ARMY ALASKA (Three Questionnaires)	
All	Control of mosquitoes.
All	Survey of the diseases in wild animals.
US ARMY RYUKYU ISLANDS (One Questionnaire)	
All	Control of arthropods.
US ARMY SUPPORT THAILAND (One Questionnaire)	
All	Surveys of wild animals.
All	As required, reduction of wild animal population.
All	News releases on prevalence of zoonotic diseases.
All	Coordination with preventive medicine and engineer personnel in rodent survey and control procedures.

SPECIES	OTHER COMMENTS
	HQ US ARMY PACIFIC (One Questionnaire)
All	Inactivated virus rabies vaccine should be used in areas where rabies does not exist.
	EIGHTH US ARMY (One Questionnaire)
All	Programs should be established to facilitate the control of external and internal parasites.
	US ARMY FORCES SOUTHERN COMMAND (One Questionnaire Consolidated for the Command)
All	Survey of diseases in wild animals.
All	Increased care of privately-owned animals would assist in the detection of zoonotic diseases.
	US ARMY EUROPE (Six Questionnaires)
All	Wild animals should not be kept as pets or mascots on a military reservation.
All	Kennels should be screened in areas where canine filariasis is enzootic.
All	Control of wild animals.
All	Control of external parasites.
	HQ US CONARC (One Questionnaire)
All	Control procedures for vectors and wild animals should be coordinated with engineer personnel.
All	Veterinary personnel should conduct zoonotic disease surveys on wild animals.
All	Stocking of game animals should be accomplished only after they have been examined so as to preclude the introduction of diseases.

SPECIES**OTHER COMMENTS****THIRD US ARMY**
(Two Questionnaires)**All**

The questionnaire from Fort Benning, Georgia provided a copy of a staff study related to the surveying of wild animals for zoonotic diseases. This staff study will be discussed in Annex C.

FOURTH US ARMY
(Four Questionnaires)**All**

AR 40-655 provides adequate authority for planning and implementing an effective program for the prevention and control of communicable diseases of animals; however, a TB MED should be published to provide detailed information on the prevention and control of these diseases on a world-wide basis.

All

Veterinary personnel should play an active role in the control of communicable diseases in domestic and wild animals on military reservations.

All

There should be an active program to survey and control diseases in wild animals.

All

Effective safeguard must be established over domestic animals permitted to graze on military reservations.

FIFTH US ARMY
(Three Questionnaires)**All**

Survey of diseases in wild animals.

All

Control of wild animals.

SIXTH US ARMY
(Three Questionnaires)**All**

Control of wild animals.

US ARMY MED DEPT VETERINARY SCHOOL
(Three Questionnaires)**All**

Wild animals held as pets should receive all required immunizations and tests.

SPECIES	OTHER COMMENTS
	US ARMY MED RSCH AND DEV CMD (Eight Questionnaires)
All	A representative sample of rodents being maintained in a laboratory should be sacrificed and post-mortem examinations should be performed monthly.
All	Physical examination, including required tests, should be conducted on laboratory animals at time of arrival.
All	Control of wild animals.
All	Quarantine of laboratory animals at time of arrival.
All	Routine vaccinating and testing of laboratory animals.
All	The control of wild animals should be coordinated with Federal, State and local officials.
All	One or more Army laboratories should be designated as a center to provide diagnostic support and consultation services for the care of laboratory animals.
Primates (monkeys, etc.)	Human gamma globulin should be administered to animal handlers and veterinarians working with newly arrived chimpanzees and other primates which may be carriers of infectious hepatitis.
Monkeys	Elimination of macaque monkeys showing oral lesions suggestive of B virus infection or positive reaction to tuberculin.
All	Complete post-mortem and histopathological examination of laboratory animals which die or are destroyed.

Analysis: The comments were consolidated by command when more than one questionnaire was returned. Certain related comments were consolidated. Comments were edited to present standard wording when listed more than one time. Others were omitted so as to present only those considered to be most pertinent. Some of the comments were identical to those provided for question 4. This resulted from question 6 dealing, in part, with control of wild animals, while question 4 was concerned with the control of communicable diseases of animals transmissible to man. Control of wild animals would be an important consideration in both questions. Comments selected for further discussion are as follows:

(a) Consideration must be given to known prevalence or absence of disease in an area and acceptability of certain immunizing agents in the area.

Discussion: It is essential that immunizing agents used in Government-owned or privately-owned animals comply with the laws of the various states or foreign countries. As an example, Japan has a law prohibiting the use of modified, live virus rabies vaccine. The proposed revision to AR 40-655, at Annex D, has been rewritten to provide for such contingencies.

(b) Disease control measures in laboratory animals must be oriented so as not to interfere unduly with the studies for which the animals are being used.

Discussion: AR 40-655 and the proposed revision thereto provide such latitude of action.

(c) Inactivated virus rabies vaccine should be used in areas where rabies does not exist.

Discussion: See (a), above.

(d) Programs should be established to facilitate the control of external and internal parasites.

Discussion: Animal handlers are trained to conduct routine examinations for external parasites. When observed, their presence would be reported to the veterinarian. The proposed revision of AR 40-655 addresses the examination of Government-owned animals for internal parasites.

(e) Wild animals should not be kept as pets or mascots on a military reservation.

Discussion: This problem must be resolved at a local level. Unit mascots are relatively common in the US Army, particularly in oversea areas.

(f) Kennels should be screened in areas where canine filariasis is enzootic.

Discussion: This is a desirable practice; however, local conditions would determine whether or not this would be accomplished. Such factors as the degree of permanency of the kennel and the availability of materials would be primary considerations.

(g) Control procedures for vectors and wild animals should be coordinated with engineer personnel.

Discussion: This comment has been discussed under question 4 (comment (v)).

(h) Veterinary personnel should conduct zoonotic disease surveys on wild animals.

Discussion: See (g), above.

(i) Stocking of game animals should be accomplished only after they have been examined so as to preclude the introduction of communicable diseases.

Discussion: This is a problem which must be resolved on a local level. Authority for such examinations is found in AR 40-655 and the proposed amendment thereto.

(j) Effective safeguards must be established over domestic animals permitted to graze on military reservations.

Discussion: Minimum safeguards are established in AR 40-655 and the proposed revision thereto. Details of such a program should be established locally.

(k) The control of wild animals should be coordinated with Federal, State, and local officials.

Discussion: This is a problem to be resolved locally. Certain species of animals are protected by Federal or State legislation.

(l) Human gamma globulin should be administered to animal handlers and veterinarians working with newly arrived chimpanzees and other primates which may be carriers of infectious hepatitis.

Discussion: AR 40-5 grants the surgeon of a command authority to prescribe such immunizations as are required for the protection of the command. Immunization against infectious hepatitis must be determined on a local level.

4. Summary. All questions, with the exception of question 5, were subjective in nature and a wide variation in responses resulted. It was possible to convert the responses to question 1 to a tabular format; however, the responses to the other questions were too unwieldy for a similar format. In general, the recommendations as to immunizations,

diagnostic tests, control procedures, etc., were excessive. This resulted from many respondents thinking in terms of maximum requirements on a world-wide basis. This action is not being censured because it provided a wide range of recommendations from which to make selections for further discussion and consideration. Also, it was observed that the majority of the recommendations in questions 3, 4, and 6 are adequately provided for by the provisions of current Army Regulations. The principal observations derived from a review and analysis of the questionnaires are:

- a. Requirements for immunizations must be revised.
- b. Requirements for diagnostic tests and examinations must be revised.
- c. Chemoprophylaxis must be required for psittacine birds.
- d. The role of veterinary personnel in wildlife surveys and control programs must be more clearly defined.

TAB A
to
APPENDIX I
to
ANNEX C

QUESTIONNAIRE

This questionnaire is submitted to you for the purpose of collecting information to be used in conjunction with a recently initiated Combat Developments Command study titled, "Prevention and Control of Communicable Diseases of Animals." The information collected during this study, as appropriate, will ultimately be incorporated in a DA publication addressing the prevention and control of communicable diseases of animals. It is anticipated that this publication will be equally applicable to CONUS and oversea commands. In questions 1, 2, and 3, the term "other animals under military control" applies to privately-owned animals which are maintained on or admitted to a military reservation to include those animals permitted to graze on a military reservation by lease agreement. It is suggested that you read through the entire questionnaire before responding to individual questions. The questionnaire has been designed to provide space for you to answer the various questions; however, if required, please use continuation sheets. Typewritten responses are preferred, but handwritten responses will be readily accepted.

1. Which immunizations should be required for the prevention/control of communicable diseases in Government-owned animals and other animals under military control? Please provide immunizations, species to be immunized, and type of biological product for each immunization.

- a. Government-owned animals.
- b. Other animals under military control.

2. Which diagnostic tests and examinations should be required for the prevention/control of communicable diseases in Government-owned animals and other animals under military control? Please list diseases, specific tests and examinations, and frequency of tests and examinations.

- a. Government-owned animals.
- b. Other animals under military control.

3. Which procedures governing the movement and control of animals should be required for the prevention/control of communicable diseases in Government-owned animals and other animals under military control?

- a. Government-owned animals.
- b. Other animals under military control.

4. Which procedures, in addition to those presented in questions 1, 2, and 3 above, are specifically required to detect, prevent, and control those communicable diseases of animals transmissible to man?

5. Do you have a regulation(s) in your area related to the prevention/control of communicable diseases in animals? If so, please provide a copy.

6. Other comments. (Should include, but not be limited to, special control procedures for vectors and wild animals; also, any special considerations for the prevention/control of communicable diseases in laboratory animals.)

TAB B
to
APPENDIX I
to
ANNEX C

C O P Y

DEPARTMENT OF THE ARMY
UNITED STATES ARMY INFANTRY CENTER AND FORT BENNING
OFFICE OF THE POST VETERINARIAN
Fort Benning, Georgia 31905

AJISU-V

13 May 1968

STAFF STUDY

SUBJECT: Determination of Zoonotic Diseases on the Fort Benning Reservation

1. PROBLEM: To determine the presence of zoonotic diseases in the wild life on the Fort Benning reservation.

2. ASSUMPTIONS: Many troops may be exposed to zoonotic diseases due to contact with wild animals.

3. FACTS BEARING ON THE PROBLEM:

a. Wild animals are very abundant on the Fort Benning reservation.

b. Fort Benning is a training center with large troop concentrations.

c. Large numbers of troops are often in the field where the possibility of exposure to zoonotic diseases carried by wild animals is greatly increased.

4. DISCUSSION: Wild animals submitted by the Wild Life Management Department of Fort Benning are to be tested for the following zoonotic diseases: Rabies, Leptospirosis, Tularemia, Brucellosis, Rocky Mountain Spotted Fever, Systemic Funguses, Arboviruses, and Toxoplasmosis. Necropsies will be performed on selected animals and bacteriological and

AJISU-V

13 May 1968

SUBJECT: Determination of Zoonotic Diseases on the Fort Benning Reservation

histological examinations will be conducted when necessary. Examination for internal and external parasites will also be conducted. (See Annex 1 for details.)

5. CONCLUSION: Zoonotic diseases may present a potential health hazard to the troops at Fort Benning due to their frequency of contact with wild animals.

6. ACTION RECOMMENDED: It is recommended that this study be conducted to determine the presence of zoonotic diseases so that actual and potential health hazards in the troops related to zoonotic diseases may be evaluated.

s/ Rodger D. Atkins
t/ RODGER D. ATKINS
Captain, VC
Deputy Post Veterinarian

OPERATION OF ZOONOSIS STUDY

1. The animals which are to be used will be brought to the Veterinary Clinic by the Wild Life Management Department.
2. When necessary the animals will be anesthetized as follows:
 - a. A snare will be placed around the animal's neck and the hind legs will be grasped. The animal will then be stretched out in order to immobilize it for the administration of the anesthetic.
 - b. Pentobarbital (1cc per 5 lbs) will be injected into the lungs by use of an 18 guage needle and syringe.
 - c. The animal will then be placed in a holding cage until it is anesthetized.
 - d. If the animal is too vicious to adequately restrain with a snare, the animal will be restrained by use of a tranquilizer gun (nicotine sulfate).
3. When the animal is adequately anesthetized, as much blood as possible (up to 30 cc) will be drawn from the left ventricle. The blood will be allowed to clot. It will then be centrifuged and the serum will be frozen. The frozen serum will be sent to the Third US Army Medical Laboratory for testing for specific zoonotic diseases in the following order of preference: Leptospirosis, Tularemia, Brucellosis, Rocky Mountain Spotted Fever, Arboviruses, Systemic Funguses and Toxoplasmosis.
4. After blood has been drawn, the animal will be combed for ectoparasites by personnel from Preventive Medicine Division, Martin Army Hospital. All ectoparasites collected will be submitted to the entomology section of Preventive Medicine for identification.
5. Following collection of ectoparasites, each animal will be euthanized and a necropsy will be performed on animals which appear diseased. Bacteriological and histological examinations will be conducted if indicated. Any specimens will be submitted to the Pathology Department, Martin Army Hospital, for examination.
6. Fecal samples from the entire intestinal tract will be collected from randomly selected animals then frozen and sent to Third US Army Medical Laboratory for examination and identification of intestinal parasites.

7. The heads from randomly selected animals and possible rabies suspects will be submitted to the Third US Army Medical Laboratory for examination for rabies.

8. In order to identify the animals and samples, each animal will be given a control number. Each sample taken from an animal will be labeled and identified by the animal's control number. The control numbers will be as follows:

Fox	Squirrel	Raccoon	Skunk	Feral Dogs	Bobcat
1000	2000	3000	4000	5000	6000

Control numbers for other species will be issued as needed. A running total will be kept on each species as follows: 1003 would be the third fox examined, 4041 would be the forty-first skunk examined.

9. Equipment and Materials:

- a. Sodium Pentobarbital.
- b. Heavy leather gloves.
- c. Dog snare.
- d. Post mortem knife.
- e. No. 4 Bard Parker handle.
- f. No. 10 scalpel blades.
- g. Mouse tooth thumb forceps.
- h. Enterotome scissors.
- i. Scissors; one blunt, one sharp point.
- j. 15 cc sterile glass tubes w/o anticoagulant.
- k. 18 gauge hypodermic needles.
- l. 21 gauge hypodermic needles.
- m. 15 cc disposable syringes.
- n. Gum labels.

- o. Fecal collection cans.
- p. Sterile swabs.
- q. Surgeon's gloves.
- r. Ectoparasite comb.
- s. Specimen bottles.
- t. Formaldehyde solution, 10%.
- u. Culture media.
- v. Centrifuge.

APPENDIX II

to

ANNEX C

LIST OF ZOONOSES^{29/}

<u>DISEASE</u>	<u>ANIMALS PRINCIPALLY INVOLVED</u>
<u>Viral Diseases</u>	
Arbovirus infections	Rodents Birds Equines Goats Sheep Monkeys Swine Marsupials
Encephalomyocarditis	Rodents
Herpes B virus disease	Monkeys
Herpes T (-M) virus infection	Monkeys
Influenza	Swine
Lymphocytic choriomeningitis	Mice Dogs Monkeys
Newcastle disease	Chickens
Poxvirus infections	
Buffalopox	Buffaloes
Camelpox	Camels
Cowpox	Cattle
Orf (contagious ecthyma)	Sheep and goats
Paravaccinia (milkers' nodules)	Cattle
Yaba disease	Monkeys
Rabies	Carnivores Bats Other wild animals
(?) Sendai virus disease	Swine Rodents
Cat scratch disease	Cats

<u>DISEASE</u>	<u>ANIMALS PRINCIPALLY INVOLVED</u>
<u>Rickettsial Diseases</u>	
Plea-borne	
Murine (endemic typhus)	Rats Mice
Mite-borne	
Rickettsial pox	Mice
Scrub typhus (tsutsugamushi)	Rodents
Tick-borne	
(North) Queensland tick typhus	Bandicoots Rodents
Spotted fever (including--	Dogs
Rocky Mountain fever	Rodents
Brazilian fever	Other animals
Colombian spotted fever)	
Fievre boutonneuse	Dogs
Kenya typhus	Rodents
South African tick typhus	
Indian tick typhus	
North Asian tick-borne rickettsiosis	Rodents
Q fever	Cattle Sheep Goats Wild and domestic mammals and birds
<u>Bedsonia Infection</u>	
Psittacosis (ornithosis)	Psittacines and other birds
<u>Bacterial Diseases</u>	
Anthrax	Ruminants Equines Swine
Brucellosis	Cattle Swine Goats Sheep Horses

<u>DISEASE</u>	<u>ANIMALS PRINCIPALLY INVOLVED</u>
Enterobacterial infections Arizona infections	Poultry Swine Dogs Poultry Swine Dogs Mammals Birds
Colibacillosis	
Salmonellosis	
Erysipeloid	Swine Poultry Fish
Glanders	Equines
Leptospirosis	Rodents Dogs Swine Cattle Bandicoots
Listeriosis	Rodents Sheep Cattle Swine
Melioidosis	Rodents Sheep Cattle Swine
Pasteurellosis	Mammals Birds
Plague	Rodents
Pseudotuberculosis	Rodents Cats Fowls
Rat-bite fever	Rodents
Relapsing fever (tick-borne)	Rodents

<u>DISEASE</u>	<u>ANIMALS PRINCIPALLY INVOLVED</u>
Staphylococcosis	Cattle Dogs Occasionally other animals
Streptococcosis	Mammals
Tuberculosis	Cattle Goats Swine Cats Dogs Poultry Monkeys
Tularaemia	Rabbits Hares Sheep Wild rodents
Vibriosis	Cattle Sheep Fish

Fungal Diseases

Dermatophytosis Ringworm, favus	Cats Dogs Horses Cattle Poultry Small mammals
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Protozoal Diseases

Amoebiasis	Dogs Lower primates
Balantidiasis	Swine
Coccidiosis	Dogs
Leishmaniasis Kala Azar Oriental sore	Dogs Dogs Rodents
American	Dogs Wild mammals
Malaria	Monkeys

DISEASE

ANIMALS PRINCIPALLY INVOLVED

Pneumocystis infection

Dogs

Toxoplasmosis

Mammals
Birds

Trypanosomiasis

Dogs
Small mammals
Antelope
Cattle

Trematode diseases

Amphistomiasis
Cercarial dermatitis

Swine
Birds
Mammals
Dogs
Cats
Swine
Wild mammals

Clonorchiasis

Fish
Ruminants
Cats

Dicrocoeliasis
Echinostomiasis

Dogs
Rodents

Fascioliasis
Fasciolopsiasis

Ruminants

Heterophyiasis

Swine

Metagonimiasis

Dogs

Opisthorchiasis

Fish

Paragonimiasis

Cats

Schistosomiasis

Dogs

Wildlife

Fish

Cats

Dogs

Wildlife

Wild and domestic mammals

Baboons

Rodents

Cattle

Sheep

Antelopes

<u>DISEASE</u>	<u>ANIMALS PRINCIPALLY INVOLVED</u>
Cestode diseases	
<i>Bertiella</i> infection	Primates
Diphyllobothriasis	Fish
Dipylidiasis	Carnivores
Echinococcosis	Dogs
	Cats
	Dogs
	Wild carnivores
	Domestic and wild ungulates
Hymenolepiasis	Foxes
Inermicapsifer infection	Rodents
Sparganosis	Rats
	Mice
	Rodents
	Cats
	Carnivores
	Mice
	Other vertebrates
Taeniasis, cysticercosis and coenuriasis	Cattle
	Swine
	Sheep
	Dogs
Nematode diseases	
Ancylostomiasis	Dogs
Ascariasis	Swine
Capillariasis	Rodents
Dracunculiasis	Dogs
	Other carnivores
Filariasis	Primates
	Cats
	Dogs
Larva migrans	Other mammals
	Cats
	Dogs
	Rats
	Fish
	Other vertebrates
Oesophagostomiasis	Primates
Strongyloidiasis	Dogs
Ternidens infection	Primates
Trichinosis	Primates
	Swine
	Rodents
	Wild carnivores
Trichostrongylosis	Marine mammals
	Ruminants

<u>DISEASE</u>	<u>ANIMALS PRINCIPALLY INVOLVED</u>
<u>Arthropod Diseases</u>	
Acariasis	Domestic animals
Tunga infections	Domestic and wild mammals
Myiasis	Mammals
Pentastomid infections (including Halzoun)	Dogs Snakes Other vertebrates

APPENDIX III
to
ANNEX C

UNITED STATES PUBLIC HEALTH SERVICE REGULATION
ON IMPORTATION OF PSITTACINE BIRDS

C-III-1

Title 42—PUBLIC HEALTH

Chapter I—Public Health Service, Department of Health, Education, and Welfare

PART 71—FOREIGN QUARANTINE

Importation of Psittacine Birds

On pages 8679-8681 of the *Federal Register* of June 16, 1967, there was published a notice of proposed rule making to revise the quarantine procedures with respect to entry of psittacine birds into the United States. Interested persons were given 30 days in which to submit written data, views, or arguments in regard to the proposed regulations.

After consideration of all such relevant matter as was presented by interested persons, the proposed regulations are hereby adopted without change and are set forth below.

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Effective date. These regulations shall be effective as of the date of publication in the **FEDERAL REGISTER**.

Dated: September 19, 1967.

(*Seal*) WILLIAM H. STEWART,
Surgeon General.

Approved: October 3, 1967.

WILBUR J. COREN,
Acting Secretary.

Subpart J—Importation of Certain Things

§ 71.152, 71.153 [Deleted]

1. Subpart J is amended by deleting §§ 71.152 and 71.153.

2. A new subpart is added immediately following § 71.157 as follows:

Subpart J-1—Importation of Psittacine Birds

Sec.

71.161 Definitions.

71.162 Requests for information.

71.163 Psittacine bird treatment centers.

71.164 Entry restrictions.

71.165 Disposal of excluded birds.

71.166 Penalties.

Airwayair: The provisions of this Subpart J-1 issued under sec 361, 58 Stat. 703; 42 U.S.C. 204.

Subpart J-1—Importation of Psittacine Birds

§ 71.161 Definitions.

As used in this subpart, the term:

(a) "Psittacine birds" includes birds commonly known as parrots, Amazons, African grays, cockatoos, macaws, parrotlets, beebees, parakeets, lovebirds, lories, lorikeets, and all other birds of the order Psittaciformes.

(b) "United States" means the United States, its territories, and possessions (other than the Canal Zone).

§ 71.162 Requests for information.

All requests for instructions, application forms, and other information relating to the regulations in this part should be addressed to the Chief, Foreign Quarantine Program, National Communicable Disease Center, U.S. Public Health Service, Atlanta, Ga. 30333, or to Public Health Service quarantine stations at U.S. ports of entry.

§ 71.163 Psittacine bird treatment centers.

(a) **Approval of treatment centers—** (1) **Minimum standards for approval.** To be eligible for approval, psittacine bird treatment centers shall meet the following minimum standards and such other requirements as shall be determined by the Surgeon General as necessary for the proper care and treatment of psittacine birds.

(i) They will be located outside of the United States.

(ii) They will be so constructed as to provide adequate sanitation.

(iii) They will be under the direction and supervision of a director approved by the Surgeon General as qualified by experience, education, and training to supervise and direct the operations of the center.

(iv) They will provide access to the treatment center and to books and records thereof, to authorized representatives of the Surgeon General for inspection purposes.

(v) They will, upon request of the Surgeon General, provide samples of psittacine birds and specimens of psittacine bird blood, food, feces, medication, and related material which the Surgeon General deems necessary to ascertain the compliance of the center with procedures and medication approved by the Surgeon General for psittacine bird treatment.

(vi) They will maintain complete records of all birds received, treated, and shipped including date of each shipment, and name and address of consignee.

(2) **Application for approval.** Application for approval of a treatment center shall be addressed to: Chief, Foreign Quarantine Program, National Communicable Disease Center, U.S. Public Health Service, Atlanta, Ga. 30333. The application shall be made on a form prescribed by the Surgeon General and shall provide the following information and any other information which the Surgeon General may deem necessary in determining that satisfactory disease prevention measures will be provided in the care, treatment, shipment, and handling of psittacine birds.

(i) The name and address of the treatment center.

(ii) A detailed description of the treatment center including:

(a) A plat showing location of the treatment center building(s) with respect to other adjacent buildings and structures;

(b) Floor plans of the treatment center building(s); and

(c) A description of the type of building construction.

(iii) A statement of measures that will be used to maintain good sanitation and protect the health of the birds.

(iv) A statement of the method to be used for assaying the medication used in the treatment of the birds, and the name and address of the laboratory that will make the assays.

(v) Evidence satisfactory to the Surgeon General that the treatment center director meets the requisites of subparagraph (1) (iii) of this paragraph.

(3) **Issuance of certificate of approval.** If the Surgeon General finds that the treatment center meets the requisites of approval as established by subparagraphs (1) and (2) of this paragraph, he will issue a certificate of approval which will be valid until suspended or revoked.

(b) **Suspension of certificate of approval, and opportunity for hearing.** Whenever the Surgeon General has reasonable ground to believe that a treatment center is not conforming to the requirements of this subpart, he may, upon notice to the treatment center, suspend the certificate of approval, and provide reasonable opportunity for a hearing thereon. The hearing will be within the United States at a place designated by the Surgeon General.

(c) **Revocation of certificate of approval.** The Surgeon General shall re-

voke a certificate of approval whenever a treatment center whose certificate of approval has been suspended, fails to avail itself of the hearing opportunity; or when after such hearing, the Surgeon General determines that any of the reasons for suspension remain uncorrected and warrant revocation.

(d) **Reinstatement of certificate of approval.** A certificate of approval which has been suspended may be reinstated upon a showing of compliance with required standards and upon such inspection, examination and assurance of continued compliance as may be considered necessary by the Surgeon General.

§ 71.164 Entry restrictions.

(a) **Health of birds—(1) Disease-free appearance.** Except for birds brought in under the special provisions of subparagraph (3) of this paragraph, and of paragraph (c) of this section, psittacine birds shall be permitted entry into the United States only if all birds in the shipment appear to the quarantine officer at the port of entry to be free from evidence of communicable disease.

(2) **Specimens for study by Public Health Service.** Upon arrival at a U.S. port of entry, of a shipment of psittacine birds from an approved psittacine bird treatment center, the quarantine officer may take specimens of psittacine bird blood, feces, medication, and related material from such shipment, for laboratory study. If the owner or his representative refuses permission for the taking of such specimens, the shipment shall be denied entry.

(3) **Admission of birds not appearing to be disease-free and of exposed birds.** When a bird, upon arrival at a U.S. port of entry, shows symptoms suggestive of communicable disease (but other entry requirements are met), the medical officer in charge may authorize its admission and admission of healthy appearing birds in the shipment if he is satisfied that adequate protection against introduction of communicable disease will be provided by measures arranged and paid for by the owner. Such measures shall include immediate isolation of the birds and immediate care by a specific licensed veterinarian who shall provide necessary treatment with approved medication and report the birds' condition to the medical officer in charge before the birds are released from isolation.

(b) **Entry document for birds from treatment centers.** Each shipment of psittacine birds from an approved treatment center shall be accompanied by an entry document prescribed by the Surgeon General. This document shall show the treatment center certificate of approval number, shall identify the birds by quantity and kind, shall show the name and address of the consignee, shall be subscribed and sworn to by the treatment center director, before a U.S. Consular or Embassy official in the country where the treatment center is located, and shall contain a certification by said director as to the following points:

(1) **Certification of treatment at treatment center.** That for a minimum of

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45 consecutive days immediately before shipment to the United States the birds have been confined in said treatment center and treated with chlortetracycline, or other approved medication, prepared and administered in accordance with procedures approved by the Surgeon General for psittacosis control.

(2) *Certification of treatment and segregation of birds during shipment to the United States.* That arrangements have been made whereby such medication will be continued during shipment of psittacine birds to the United States, that during such shipment said birds will be confined in different cages from any other birds, and that said cages and any outer containers therefor will be so constructed as to permit easy observation of the birds.

(c) *Birds imported for medical research.* Psittacine birds intended for use in medical research may be permitted entry into the United States without prior confinement and treatment if the following conditions are met.

(1) *Permit.* They are accompanied by a permit issued by the Surgeon General. Application for the permit shall be submitted by the person seeking to import the birds for medical research purposes, and shall contain such information and assurances as the Surgeon General may require concerning use of the birds in the proposed research.

(2) *Scientific use.* The scientific basis for the use of untreated birds is established to the satisfaction of the Surgeon General.

(3) *Protection against disease.* The birds are imported under conditions prescribed by the Surgeon General to minimize the risk of introduction of communicable disease into the United States.

(4) *Disease-free appearance.* They appear to the quarantine officer at the port of entry to be free from evidence of communicable disease, unless otherwise specified in the permit, or admission is authorized pursuant to paragraph (a) (3) of this section.

(d) *Certain birds imported by a zoological park.* Psittacine birds which, in the opinion of the Surgeon General, cannot be treated satisfactorily as specified in paragraph (b) (1) of this section at an approved treatment center outside the United States, may be imported by a zoological park without prior confinement and medication if the following conditions are met.

(1) *Permit.* They are accompanied by a special permit issued by the Surgeon General, pursuant to an application made therefor.

(2) *Restriction on disposition of birds.* Assurance is given that the birds will not be sold or given, either directly or indirectly, to any private individual or dealer in birds.

(3) *Disease-free appearance.* They appear to the quarantine officer at the port of entry to be free from evidence of communicable disease, unless admission is authorized pursuant to paragraph (a) (3) of this section.

(4) *Treatment facilities and staff.* The zoological park has a staff veterinarian

and facilities for isolating psittacine birds, and has been approved by the Surgeon General for purposes of the regulations in this part.

(5) *Isolation and treatment.* On arrival at the zoological park the birds will be isolated for at least 45 days, and throughout that period will be treated with approved medication under conditions satisfactory to the Surgeon General.

(e) *Birds imported as pets.* Psittacine birds intended as pets may be imported by the persons who intend to keep them as pets, without prior confinement and treatment, if the following conditions are met.

(1) *Disease-free appearance.* The birds appear to the quarantine officer at the port of entry to be free from evidence of communicable disease, unless admission is authorized pursuant to paragraph (a) (3) of this section.

(2) *Certificate.* The owner submits a written statement certifying the following points.

(i) That not more than a total of two (2) birds are imported under this paragraph in any 12-month period by members of a family comprising a single household.

(ii) That the birds are not intended for sale or trade in the United States.

(iii) That the requirements of (a) or (b) and of (c) of this subparagraph, will be met.

(a) If the birds have been in the owner's possession and personal custody for at least 90 days immediately before arrival, except for any period occasioned by arrival of the owner and birds on separate conveyances, the owner shall submit a written certification that upon admission, the birds will be treated for 45 days with chlortetracycline or other approved medication. Medication may be administered on the premises of the owner of the birds, but must be under the supervision of a licensed veterinarian, and at the owner's expense. If the owner has not made the necessary arrangements with a licensed veterinarian before arrival of the birds, they shall be excluded unless he arranges for such supervision promptly upon their arrival at the port of entry. Pending such arrangements, the owner shall have the birds held in such a manner that the quarantine officer is satisfied that they do not present a serious health hazard.

(b) If the birds have been in the owner's possession and personal custody immediately before arrival, but for less than 90 days, the owner shall certify in writing that upon admission, the birds will be confined and treated with chlortetracycline or other approved medication for 45 days, in detention facilities on the premises of and under immediate care of a licensed veterinarian. Detention and medication will be accomplished at the owner's expense. Such veterinarian's detention facilities may be located either at the port of arrival or elsewhere in the United States. If the owner has not made the necessary arrangements with a veterinarian before arrival of the birds, they shall be excluded unless he promptly makes such arrangements with a veter-

inarian on whose premises the required detention and medication will be accomplished. Pending the making of such arrangements, the owner shall provide for having the birds held in such a manner that the quarantine officer is satisfied that they do not present a significant health hazard.

(c) The owner or the veterinarian shall report promptly to the quarantine officer at the port of entry any sickness or death of the birds during the required period of medication and follow the quarantine officer's instructions concerning measures to prevent the spread of infection.

(f) *Birds being returned to the United States.* When psittacine birds have been taken out of the United States and the requirements of paragraph (e) of this section are not fully complied with upon their return, they may be admitted provided the following conditions are met.

(1) *Disease-free appearance.* They appear to the quarantine officer at the port of entry to be free from evidence of communicable disease, unless admission is authorized pursuant to paragraph (a) (3) of this section.

(2) *Permit.* They are accompanied by a permit for return issued by the Surgeon General. Application for such permit may be denied unless the owner of the birds applies for the permit before their departure from the United States and the application includes a statement as to the itinerary, the number and description of the birds, and such other information as the Surgeon General may require.

(3) *Required information and certification.* At the port of entry the owner furnishes any information that may be required by the Surgeon General, and submits a written statement certifying the following.

(i) That he has complied with the terms of the permit.

(ii) That upon admission the birds will be treated for 45 days with chlortetracycline or other approved medication. The medication may be administered on the premises of the owner of the birds, but must be under the supervision of a licensed veterinarian, and at the owner's expense.

(iii) That the owner has arranged with a licensed veterinarian for such supervision. If the owner has not made the necessary arrangements before arrival of the birds, they shall be excluded unless he arranges for such supervision promptly upon their arrival at the port of entry. Pending the making of such arrangements, the owner shall provide for having the birds held in such a manner that the quarantine officer is satisfied that they do not present a significant health hazard.

(iv) That the owner or the veterinarian will report promptly to the quarantine officer at the port of entry any sickness or death of the birds during the required period of medication, and follow the quarantine officer's instructions concerning measures to prevent the spread of infection.

(g) *Permits: Terms and cancellation.* Any permit issued under paragraph (c),

(d), or (f) of this section may contain such conditions and safeguards as the Surgeon General may deem advisable. The permit shall be subject to cancellation if procured or used in a manner inconsistent with this section.

§ 71.165 Disposal of excluded birds.

(a) *Birds with healthy appearance.* Healthy appearing psittacine birds which are excluded from admission under these regulations shall, at the owner's option, be exported or destroyed, or given to a research facility or zoological park under arrangements approved by the quarantine officer for preventing the spread of infection. Exportation shall be permitted only if the owner exports the birds within a reasonable time as determined by the medical officer in charge. Pending disposal, the birds shall be detained at the port of entry at the owner's expense.

(b) *Birds with symptoms suggestive of psittacosis.* Psittacine birds which show symptoms suggestive of psittacosis on arrival shall be destroyed promptly unless admission is authorized pursuant to paragraph (a)(3) of § 71.164. Psittacine birds which develop symptoms suggestive of psittacosis while detained pending disposal shall be destroyed promptly unless the medical officer in charge is satisfied that measures arranged and paid for by the owner will provide adequate protection against introduction of communicable disease into the United States.

§ 71.166 Penalties.

Any person violating any provision of §§ 71.161 through 71.165 shall be subject to punishment by fine of not more than \$1,000 or imprisonment for not more than 1 year, or both, as provided in section 368(a) of the Public Health Service Act (42 U.S.C. 271(a)).

[F.R. Doc. 67-111928; Filed, Oct. 9, 1967; 8:49 a.m.]

ANNEX D

PROPOSED REVISION OF AR 40-655

Army Regulation
No. 40-655
Air Force Regulation
No. 163-__

AR 40-655
AFR 163-__
HEADQUARTERS
DEPARTMENT OF THE ARMY
Washington, D.C.,

MEDICAL SERVICE

PREVENTION AND CONTROL OF COMMUNICABLE DISEASES
OF ANIMALS

	Paragraph
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1. Purpose and scope. These regulations establish policy, fix responsibility, authorize and direct the manner in which to render reports, and outline procedures to detect, prevent, and control animal diseases among Government-owned animals and other animals under military control. This includes diseases which cause illness in animals and man and are transmissible to man (zoonoses) and certain diseases which do not cause illness in animals but the animals as reservoirs or carriers transmit infection to man. Effective control of these diseases is essential to

NOTE: Underlining denotes changes.

reduce noneffectiveness of military personnel and Government-owned animals. These regulations apply whenever such diseases are found in military animals, other animals subject to military control, and when they are enzootic or epizootic in the military environment. These regulations implement section V, AR 40-1 and section IV, AFR 163-1.

2. Responsibilities. a. Commanders will provide a health service to effectively control diseases of animals transmissible to man, and to protect the health of animals. Regarding these responsibilities, particular attention will be directed to--

- (1) Controlling or eliminating animal pests, disease reservoirs and vectors, or imposing mechanical, chemical, or other barriers between them and man.
- (2) Protecting personnel and animals from exposure to communicable diseases by isolating infectious animals, if practicable, or by limiting contact of individuals with the source of infection.
- (3) Enforcing military and other official directives governing movement of animals, to include sanitary inspection and sanitary control of vehicles, vessels, and aircraft under control of the Armed Forces. See AR 40-12, AR 55-8, AFM 75-1, AFM 75-4, and AFR 161-4.

b. The surgeon of a command will inform and advise the commander on animal diseases which can affect the health of the command.

c. The veterinarian will (see AR 40-1 and AFR 163-1) provide a veterinary health service, to include the following:

- (1) Veterinary care to animals in order to protect the health of man and animals.
- (2) Investigate and plan control measures applicable to diseases of animals to include those diseases transmissible to man.
- (3) Provide complete veterinary services for Government-owned animals including laboratory animals. Excluded are animals purchased with non-appropriated funds.
- (4) Investigate insanitary conditions encountered with Government-owned animals and make corrective recommendations.
- (5) Keep abreast of the status of communicable diseases of animals within the jurisdictional area of the command and the immediate vicinity.
- (6) Advise the surgeon of the command of the potential hazards of animal diseases.
- (7) Prepare and implement a zoonotic disease control program.
- (8) Advise the surgeon of the command of applicable laws and regulations related to the care, housing, and use of laboratory animals.

3. Prevention and control measures. a. General. The veterinarian will assist the surgeon in maintaining the health of personnel and animals by initiating effective measures for the control of animal diseases to include those diseases transmissible to man and those that may reduce his food supply. Measures to prevent the introduction and spread of animal diseases will be established and maintained. A zoonotic disease control program will be initiated in each major command and published in local regulations. Control measures may

include but are not limited to vaccination of susceptible animals; chemoprophylaxis; diagnostic tests and examinations; physical examinations; surveys for the detection of disease in domestic and wild animals; eradication of diseased animals, animal reservoirs, and vectors of disease; isolation of animals; and restricting the movement of animals. The commander, on recommendation of the surgeon, may order or authorize the physical examination of animals in his command or in an area under his jurisdiction. Animals in an area not under his jurisdiction can present hazards to military operations. In this instance, the commander may authorize and direct the surgeon or, in his absence, the veterinarian to cooperate with various local and national health agencies to arrange examination of these animals. This investigation may be for a detailed study of enzootic or epizootic disease, or to examine its sudden increase and effect or potential effect upon the military population. Vaccination certificates or health certificates will be issued to meet the requirements of applicable laws and directives.

b. Rabies control.

- (1) In accordance with local regulations, unvaccinated dogs, cats, and other privately-owned animals will not be permitted to run at large on any military reservation but will be collected at frequent intervals and confined for a reasonable length of time prior to disposal.
- (2) Military Police/Security Police personnel will collect all animals which are required to be confined. The confinement facility will be operated as prescribed by local regulations.

(3) When rabies occur in an animal at a military station or base, the commander will initiate effective control measures recommended by the surgeon (Air Force Director of Base Medical Services) and/or the veterinarian.

(4) When any animal on a military reservation bites a person, the surgeon (Air Force Director of Base Medical Services) will notify the veterinarian and initiate action to have the animal confined in accordance with local regulation. The animal will be under the observation of a veterinarian until definite signs of rabies develop or the animal has been retained in isolation confinement for 10 days. Likewise, any other animal showing signs indicative of rabies will be so confined. If a suspect animal showing signs must be destroyed to prevent human exposure, the brain will not be damaged in the process of destroying the animal. As soon as possible after death, the animal carcass will be decapitated and the intact head forwarded to a laboratory for examination as prescribed in TB MED 237 and AFR 160-3, except that material suspected to contain rabies virus will not be submitted to laboratories located in rabies-free countries, unless the specimen originates from within that country.

(5) Any animal not vaccinated against rabies bitten by another animal known or reasonably suspected to be rabid will be destroyed immediately or confined under observation of the veterinarian or the surgeon for a period of not less than 120 days, at the end of which period it may be released if no signs of rabies have developed and if rabies immunization is current as specified in paragraph 8b, below.

After confinement for a period of not less than 30 days, followed by revaccination, animals possessing a current rabies immunization may be released.

c. Control of other communicable diseases of animals. Measures will vary depending upon the disease, the numbers and species of animals involved, and the geographical and operational considerations.

4. Epidemiology. The veterinarian will collect information and maintain a history of enzootic and epizootic diseases that may influence the health of personnel and animals. Data will be derived from all available sources.

5. Ports of embarkation and debarkation. Veterinary officers will be familiar with requirements for processing animals through ports of embarkation and debarkation. See AR 40-12 / AFR 161-4.

6. Laboratories. Military medical laboratories will be utilized to the fullest extent in investigating and diagnosing diseases of animals. When approved by The Surgeon General of the interested service, the use of nonmilitary laboratories is authorized. Specimens will be collected and shipped in accordance with AR 40-31 and AFR 160-3.

7. Veterinary biological products (immunizing agents and diagnostic antigens). a. License.

(1) Normally, veterinary biologicals procured by the United States Army or United States Air Force will bear "a United States Veterinary License" number. Biological products procured from sources not licensed by United States Department of Agriculture will meet equivalent standards and be specifically authorized by the applicable Surgeon General.

(2) Immunizing agents manufactured for human use, whether licensed, investigational, or not licensed will not be administered to any animal other than Government-owned animals purchased or maintained for biological experimentation, unless specifically authorized by the applicable Surgeon General.

b. Expiration date. Biological products will not be used beyond the stated expiration dates unless the applicable Surgeon General has specifically authorized an extension.

c. Requisitions.

(1) Biological products required for Government-owned animals will be requisitioned in accordance with current medical supply procedures.

(2) Biological products required for providing veterinary care to authorized privately-owned animals will be obtained in accordance with applicable regulations.

d. Preservation. Biologicals will be transported and stored at temperatures between 2° and 10°C. (35.6° and 50°F.), unless otherwise recommended by the manufacturer. Biological products will not be used if there is a change in physical appearance, or evidence suggestive of microbiological contamination, or if they have a history of having been subjected to temperatures varying from those indicated above. A request for disposition instructions citing identifying data, circumstances, and deficiencies noted will be forwarded to the supply source with an information copy to the appropriate Surgeon General.

e. Administration of biological products.

(1) Immunizing agents will be administered only by veterinary officers or by qualified animal technicians under the direct supervision of physically present veterinary officers.

(2) Diagnostic antigens will be administered and results interpreted by a veterinary officer.

(3) Biological products will be administered and results interpreted by a licensed veterinarian when a veterinary officer is not available.

f. Categories of animals subject to diagnostic tests and examinations and immunizations under these regulations:

(1) Government-owned animals. All Government-owned animals will be examined, tested, and immunized as directed herein, except those exempt in paragraph 8b(4).

(a) Animals, immediately after purchase, will receive required initial diagnostic tests and examinations and immunizations while in quarantine status.

(b) Animals scheduled for movement to or between oversea areas will be administered required diagnostic tests and examinations and immunizations or reimmunizations at the last station prior to shipment.

(2) Privately-owned animals. The term "privately-owned animals" includes dogs, cats, and other animals which are maintained by military or authorized civilian personnel, or animals permitted on an Army or Air Force installation for any purpose. Immunizations and diagnostic

tests will be administered to privately-owned animals which are maintained on or admitted to an Army or Air Force installation as directed herein.

8. Immunization requirements. a. General.

(1) Government-owned animals will be immunized and reimmunized, when indicated, against, but not limited to, the diseases listed below according to species susceptibility in conformance with the biological product manufacturer's directions.

(a) Anthrax (the necessity for immunization will be determined by the veterinarian).

(b) Brucellosis (the necessity for immunization will be determined by the veterinarian in accordance with applicable United States Department of Agriculture/State regulations).

(c) Canine distemper.

(d) Equine influenza.

(e) Equine viral encephalitides.

(f) Infectious canine hepatitis.

(g) Leptospirosis.

(h) Rabies.

(i) Smallpox (monkey pox).

(j) Strangles.

(k) Tetanus.

(2) Privately-owned animals specified in paragraph 7f(2) will be immunized and reimmunized, when indicated, against, but not limited to, the diseases listed below according to species susceptibility in con- formance with the biological product manufacturer's directions. The vaccination of privately-owned animals will be at the owner's expense.

(a) Rabies. Routinely and mandatorily, all susceptible animals owned by military personnel will be immunized against rabies.

(b) The necessity for immunization against the diseases listed below will be determined by the veterinarian in accordance with applicable United States Department of Agriculture/State regulations and local conditions.

1. Brucellosis.
2. Equine influenza.
3. Equine viral encephalitides.
4. Leptospirosis.
5. Strangles.

b. Special.

(1) Anthrax. Normally, saponified heat attenuated spore vaccines will be used. The strength of the spore vaccine to be employed will be dictated by the area and the animal population involved.

(2) Equine viral encephalitides. After initial immunization with equine encephalitis vaccine or vaccines, all Government-owned horses and mules will be reimmunized annually and/or 2 months before the onset

of the mosquito season. All other horses and mules subject to military control will be immunized and reimmunized as indicated above, when determined necessary by the veterinarian.

(3) Rabies.

(a) Government-owned and all privately-owned dogs over 3 months of age will be vaccinated and revaccinated at least every 3 years with LEP (low egg passage) Flury chicken embryo rabies vaccine, except as specified in (c) below.

(b) When necessary to vaccinate dogs under 3 months of age, either phenolized nervous-tissue or HEP (high egg passage) Flury chicken embryo rabies vaccine will be used. These dogs will be revaccinated with LEP Flury chicken embryo rabies vaccine as soon as possible after they reach the age of 3 months.

(c) When indicated by professional judgment or when required by appropriate governmental regulations, phenolized nervous-tissue rabies vaccine may be used in lieu of LEP Flury chicken embryo rabies vaccine as prescribed in (a) and (b) above. When phenolized nervous-tissue rabies vaccine is used exclusively, dogs will be revaccinated at least annually.

(d) HEP Flury chicken embryo or phenolized nervous-tissue rabies vaccine will be used when required for the vaccination and the annual revaccination of cattle. The requirement for the rabies vaccination of Government-owned or privately-owned cattle permitted by lease agreement to graze on a military reservation will be determined by the installation veterinarian.

(e) Cats over 3 months of age will be vaccinated and revaccinated at least annually with phenolized nervous-tissue or HEP Flury chicken embryo rabies vaccine.

(f) Currently, there are insufficient data available to authorize the administration of vaccines containing live attenuated virus to other animal species. Phenolized nervous-tissue rabies vaccine will be used in accordance with the manufacturer's directions in animals other than cats, cattle, and dogs.

(g) Notwithstanding the provisions of (a) through (f) above, compliance with the laws and regulations of states/countries pertaining to vaccination of animals against rabies is mandatory.

(h) The vaccination requirements for dogs imported into the United States will comply with the current requirements of the United States Public Health Service.

(4) Biological experimentation. Authority is granted to waive the immunization of animals purchased or maintained for biological experimentation if, in the professional opinion of the responsible medical or veterinary officer, such vaccination would interfere with the animals' usefulness for scientific investigation or serve no useful purpose.

9. Diagnostic tests and examinations. Government-owned animals and privately-owned animals will be tested and examined and retested and

re-examined as indicated below. Additional diagnostic tests and examinations may be required when in the opinion of the veterinarian they are indicated. Live viruses for use as diagnostic reagents will not be introduced into areas where diseases caused by such agents are not known to exist.

a. Mallein test.

(1) Not required for horses and mules located in the United States unless specified by the applicable Surgeon General.

(2) Testing and disposition of animals either imported into the United States or located in foreign countries will be in accordance with United States Department of Agriculture and/or foreign government regulations.

b. Tuberculin test.

(1) Tuberculin will be administered to primates in accordance with TB MED 255/AFM 163-5. Retesting will be done at intervals determined by the veterinarian.

(2) Tuberculin will be administered in accordance with United States Department of Agriculture regulations to cattle that are Government-owned or privately-owned cattle permitted by lease agreement to graze on military reservations. Privately-owned cattle will be tested at the owner's expense and will be free of tuberculosis, with results of such tests forwarded to the installation commander prior to entry on the military installation.

c. Brucellosis test. Government-owned or privately-owned cattle permitted by lease agreement to graze on military installations will be tested for brucellosis in accordance with United States Department of

Agriculture/State regulations. Privately-owned cattle will be tested at the owner's expense and will be free of brucellosis with results of such tests forwarded to the installation commander prior to entry on the military installation.

d. Canine filariasis.

(1) Each prospective military dog will be examined for micro-filaria prior to purchase for the military services.

(2) Government-owned military dogs will be examined for micro-filaria at least every 6 months.

(3) One of the concentration techniques such as the Knott's test will be used for (1) and (2) above.

e. Gastrointestinal parasites. Government-owned animals will be examined for gastrointestinal parasites at a frequency determined by the veterinarian, except that Government-owned military dogs will be examined for intestinal parasites at least every 6 months.

f. Physical examinations. Government-owned animals will be examined at a frequency determined by the veterinarian, except that physical examinations are mandatory under the following circumstances:

(1) Immediately upon arrival at a station, following either procurement or transfer.

(2) Prior to movement to a new station. Such examination will be in compliance with the provisions of United States Department of Agriculture or state or foreign government regulations.

(3) Government-owned military dogs will be examined at least every 6 months in conjunction with their examination for microfilaria and intestinal parasites.

10. Chemoprophylaxis. Government-owned or privately-owned psittacine birds procured from sources outside the United States (the United States, its territories, and possessions, other than the Canal Zone) will be treated prophylactically with chlortetracycline or with an equivalent treatment of demonstrated comparable efficacy, as specified below, to prevent the transmission of psittacosis to humans.

a. As used in these regulations, the term "psittacine birds" includes birds commonly known as parrots, Amazons, African grays, cockatoos, macaws, parrotlets, beebees, parakeets, lovebirds, lories, lorikeets, and all other birds of the order Psittaciformes.

b. Prophylaxis will consist of feeding chlortetracycline impregnated bird feed for 45 consecutive days which may be supplemented by vitamins, coarse sand, and water on a free-choice basis. No other feed is to be permitted during the treatment period. Parakeets, also known as shell parakeets and budgerigars (*Melopsitticus undulatus*), shall be medicated for 45 consecutive days with hulled millet seed impregnated with at least 0.5 mg of chlortetracycline per gram. All other psittacine species shall be medicated for 45 consecutive days with pellet feed, cooked mash, or other acceptable feed containing at least 5.0 mg of chlortetracycline per gram.

c. Government-owned and privately-owned psittacine birds to be shipped from oversea locations to the United States must be in the custody of the Government/private owner for at least 90 days prior to shipment and must receive the prescribed prophylactic treatment within the last 50 days prior to shipment. Birds so treated may be shipped directly to United States ports of entry as birds treated prior to entry, provided the shipment is accompanied by a veterinary officer's certificate. Not more than a total of two privately-owned birds will be permitted for import as pets in any 12-month period by members of a family comprising a single household.

d. In addition to the requirements in c above, all Government-owned and privately-owned psittacine birds procured from sources outside the United States will be administered the 45-day chlortetracycline prophylactic treatment commencing immediately following acquisition, whether or not they are intended for shipment to the United States.

e. For privately-owned psittacine birds, prophylaxis will be prescribed and supervised by a veterinary officer to birds which are positively identified to the veterinarian before and after treatment. It may be administered, according to prescription, by the bird owner on the owner's premises. Psittacine owners will be individually responsible for complying with the provisions of these regulations, and will certify to the nature and duration of the prophylactic treatment when administered on the owner's premises. The owner's certification will be maintained by the responsible veterinary officer

who will certify to the nature and duration of the prophylactic treatment, and in addition, will perform a physical examination of the bird(s) within 5 days prior to shipment and certify as to their "disease-free appearance." Four copies of each certification will accompany the shipment of bird(s). Such certificates may be locally reproduced. If for any reason pre-shipment chemotherapy as prescribed herein cannot be completed prior to shipment, treatment at destination by a veterinary officer or licensed civilian veterinarian must be arranged in detail prior to reaching the United States port of entry, to the satisfaction of the United States Public Health Service quarantine officer. The treatment of privately-owned birds will be at the owner's expense.

f. Government-owned psittacine birds will be treated prophylactically as prescribed herein except when, in the opinion of the responsible medical or veterinary officer, such treatment would interfere with the birds' usefulness for scientific investigation.

g. In addition to the requirements prescribed herein, all applicable provisions of AR 40-12/AFR 161-4 and US Public Health Service regulations pertaining to the importation of psittacine birds into the United States will be complied with.

11. Records of immunization and registration. a. Rabies Vaccination Certificate (DD Form 793) will be prepared for each animal immunized. The original copy will be furnished the military unit having property responsibility or the private owner, as applicable. The duplicate will

be filed by the veterinarian administering the vaccine. Additional copies may be made, as required by local policy or regulations.

b. Vaccination certificates for diseases other than rabies and diagnostic test certificates may be prepared. When prepared they will be signed by the veterinarian. Preparation and distribution of the certificates will be in accordance with local policy or regulations.

c. Registration of privately-owned animals will be in accordance with local policy or regulations. At those Army installations to which a Veterinary Corps officer is assigned, registration of privately-owned animals will normally be accomplished by the veterinarian following coordination with the provost marshal.

12. Special Reports to military and civilian authorities. a. Military Reports are submitted in accordance with AR 40-417 and AFR 163-1. Special reports within the Air Force will be sent through appropriate channels to the Assistant Surgeon General for Veterinary Services.

b. As required by United States Government or state or foreign government regulations, the veterinarian of every station, base, or separate command will provide prompt notification of communicable diseases of animals to appropriate public health and livestock sanitary officials. Station and base veterinarians will maintain complete information for their area on the public health and livestock sanitary requirements relevant to communicable diseases of animals.

ANNEX E

RESPONSES TO ESSENTIAL ELEMENTS OF ANALYSIS

EEA 1. Which immunizations are required to prevent and control communicable diseases in Government-owned animals and other animals under military control?

Response: Mandatory immunizations for Government-owned animals and privately-owned animals are contained in paragraph 8 of the proposed revision of AR 40-655 at Annex D. In addition to mandatory immunizations, animals may be immunized against other diseases as influenced by local conditions.

EEA 2. Which diagnostic tests and examinations are required to prevent and control communicable diseases in Government-owned animals and other animals under military control?

Response: Mandatory diagnostic tests and examinations for Government-owned animals and privately-owned animals are contained in paragraph 9 of the proposed revision of AR 40-655 at Annex D. In addition to mandatory tests and examinations, the veterinarian has the option of employing such other tests and examinations as may be required.

EEA 3. Which procedures governing the movement and control of Government-owned animals and other animals under military jurisdiction are required to prevent and control communicable diseases of animals?

Response: The proposed revision of AR 40-655 at Annex D contains general control provisions authorizing such measures as eradication of diseased animals, animal reservoirs and vectors of disease; isolation of animals; restricting the movement of animals; physical examinations; immunizing animals; and conducting diagnostic tests and examinations. The provisions of AR 40-655 and allied Army Regulations provide adequate authority and guidance pertaining to the movement and control of animals. Detailed control programs will have to be established locally and, as appropriate, be published in local regulations.

EEA 4. Which procedures are required to detect, prevent, and control those communicable diseases of animals transmissible to man?

Response: The general provisions of AR 40-655 and other allied Army Regulations are adequate for the control of those communicable diseases of animals transmissible to man (zoonotic diseases); however, the revision of AR 40-655 must contain specific authority for veterinary personnel to participate in programs, e.g., the survey for and control of zoonotic diseases in wild animals. Paragraph 3 has been

revised accordingly. Veterinary personnel are currently participating in such programs, and this revision specifically authorizes and directs such participation.

EEA 5. What are the personnel and equipment requirements of Army Medical Department units to facilitate the performance of those functions in EEA's 1, 2, 3, and 4 above?

Response: Based on the current basis of allocation for Army Medical Department units, the personnel and equipment allowances are adequate for the performance of those functions identified in EEA's 1, 2, 3, and 4 above. They are all extensions of or modifications to current tasks. All may be accomplished through the effective utilization of current resources. There will, however, be a requirement to provide those supplies required for the additional immunizations and diagnostic tests and examinations identified in EEA's 1 and 2 above.

EEA 6. What information should be incorporated in field manuals or other military publications to implement the changes recommended in EEA's 1, 2, 3, and 4 above?

Response: The changes recommended in the above EEA are of such a nature that they will not require incorporation in field manuals, but instead should appear in a revision of AR 40-655.

EEA 7. What method should be used to disseminate the information derived from this study?

Response: It has been determined that the preferred method for disseminating the information derived from this study is through a revision of AR 40-655. The proposed revision of AR 40-655 is at Annex D.

ANNEX F

REFERENCES

1. AR 40-1, Composition, Mission, and Functions of the Army Medical Department.
2. AR 40-5, Preventive Medicine.
3. AR 40-12, Medical and Agricultural Foreign and Domestic Quarantine Regulations for Vessels, Aircraft, and Other Transport of the Armed Forces.
4. AR 40-417, Morbidity Reports, Tables and Charts.
5. AR 40-655, Prevention and Control of Communicable Diseases of Animals.
6. AR 40-657, Veterinary Food Inspection.
7. AR 40-905, Veterinary Service for Public Animals.
8. AR 40-920, Veterinary Laboratory Service.
9. AR 190-12, Sentry Dogs.
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This study determines procedures required to facilitate the prevention and control of communicable diseases of animals in CONUS and oversea areas to include sufficient detail to determine requirements for immunizations, diagnostic tests and examinations, and the movement and control of Government-owned animals and other animals under military control.

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